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AUTHOR Chan Kopka, Teresita L.
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ABSTRACT

This report on doctorate recipients presents detailed data (90 percent of the document) from the 1979, 1984, and 1989 Surveys of Earned Doctorates. Aggregate data for academic years 1966 to 1989 are displayed in table 1 to show the changes in the number of education and total doctorate degrees covered by the survey. Data from other tables show the demographic characteristics of doctorate recipients such as sex, age, race/ethnicity, marital status, and citizenship; as well as the program areas and fields of specialization in education; the personal background characteristics of dependents and educational attainment of parents; and economic variables, including sources of support during graduate study, amount of debt outstanding at time of graduation, and postgraduation employment status. Among the survey findings highlighted are the following: (1) among 11 program areas, education registered the highest percentage share of doctorates in the years under study, but its share is shrinking from 23.6 percent to 18.3 percent over the most recent 3-year period; (2) 10 or more years elapsed from year of baccalaureate to year of doctorate for 56.8 percent of 1989 graduates with 90.1 percent of education recipients taking this amount of time; (3) 50 percent of the 1989 doctorate recipients planned to work in academe and another 17.9 percent planned to work in industry; and (4) 26.1 percent of doctorate recipients were non-U.S. citizens. (GLR)

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Characteristics of Doctorate Recipients: 1979, 1984, and 1989

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Characteristics of Doctorate Recipients: 1979, 1984, and 1989

Teresita L. Chan Kopka
Postsecondary Education Statistics Division

U.S. Department of Education
Office of Educational Research and Improvement NCES 91-384

U.S. Department of Education
Lamar Alexander
Secretary

Office of Educational Research and Improvement
Diane Ravitch
Assistant Secretary

National Center for Education Statistics
Emerson J. Elliott
Acting Commissioner

National Center for Education Statistics

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January 1992

Contact:
Teresita L. Chan Kopka
(202) 219–1771

Highlights

This report on doctorate recipients presents detailed data from the 1979, 1984 and 1989 Surveys of Earned Doctorates. Aggregate data for academic years 1966 to 1989 are displayed in table 1 to show the changes in the number of education and total doctorate recipients during the last two decades. For convenience, the term "Ph.D." is used to represent any of the doctoral degrees covered by this survey. Some programs use other titles, such as "Ed.D." for certain education doctorates. In 1989, 10 percent of the doctorate recipients received an Ed.D.

- In 1989, a total of 34,319 individuals received their doctoral degrees, 91.2 percent more than the 1966 total of 17,949 (table 1). During this period the number of female doctorate recipients rose dramatically from 2,086 degrees in 1966 to 12,508 in 1989. New male Ph.D.s increased from 15,863 in 1966 to a high of 27,754 in 1972. By 1989, they dropped to 21,811 which was a 28.4 percent decrease from 1972. The number of education doctorates peaked (7,725) in 1976, then decreased steadily from 1980 to 1989.

Program area

- Among all 11 program areas, education registered the highest percentage share of doctorates in 1979, 1984, and 1989, but its share shrank from 23.6 percent in 1979 to 18.3 percent in 1989 (table 2). Humanities, social sciences and history also decreased their percentage shares during this same time period. Program areas that showed increases in their percentage share of doctorates during this 11-year span were engineering (8.0 to 13.2 percent) and the physical sciences (13.8 to 15.9 percent).

Background characteristics

- In 1979, 1984, and 1989, female doctorate recipients were considerably more likely to have earned doctorates in education than any other program area. Males, on the other hand, were more likely to receive their doctorates in the physical sciences in 1984 and 1989; although, in 1979 the top field for male doctorate receipients was education (table 2).
- The median age of doctorate recipients in 1979 was 31.9 years and 33.9 years in 1989. Education had the highest and physical sciences doctorate recipients had the lowest median ages in all three years.
- From 1979 to 1989 the increase in the number of doctorates of about 10 percent (from 31,239 to 34,319, table 2) was largely due to increases in the number of degrees earned by three racial/ethnic groups: Asians had a 99.2 percent increase; Hispanics had a 18.2 percent increase; and American Indians had a 11.9 percent increase. Whites and blacks registered decreases of 1.4 and 13.8 percent, respectively. This same pattern, persisted when only U.S. citizens were considered (tables 6.1 and 8.1).
- For the three years analyzed (1979, 1984 and 1989), the most prevalent program areas among whites, blacks and Hispanics were education and the social sciences (table 2). Engineering and the physical sciences were the most preferred programs among Asians.
- In 1979, one out of four (25.1 percent) of the doctorate recipients' fathers had not finished high school, 12.9 percent had fathers with a master's or professional degree and 5.7 percent had fathers with a Ph.D. (table 3.1). There were significant shifts of these percentages by 1989 (table 5.1). In 1989, 19.3 percent of doctorate receipients' fathers had not finished high school, 16.4 percent had fathers with a master's or professional degree, and 8.5 percent had fathers with a doctorate. An increase in the educational level of doctorate receipients' mothers was also evident, but the changes were not as large. It is interesting to note that in 1979, 37.4 percent of education doctorate recipients' fathers had no high school degree. In 1984 and 1989, 34.0 percent and 30.0 percent of education doctorate recipients' fathers had no high school degree (tables 4.1, 5.1).

Citizenship and country of origin

- In 1979, 16.2 percent of doctorate recipients were non-U.S. citizens. This proportion rose to 20.1 percent in 1984, and to 26.1 percent in 1989 (tables 3.1, 4.1 and 5.1). Most of the increase for this group occurred for those non-U.S. citizens with temporary-resident status. Temporary residents accounted for 11.8 percent of

doctorates in 1979, for 16.1 percent in 1984 and 21.0 percent in 1989. It is interesting to note that temporary residents were more likely than other groups to specialize in engineering or physical sciences: 52.3 percent of the doctorates awarded to temporary residents in 1989 were in these areas of specialization (table 5.2).

- Non-U.S. citizens were significantly more likely than U.S. citizens to have majored in engineering and the pattern was reversed for education (tables 3.2, 4.2, 5.2).

- Among the 20 countries (excluding the United States) which had the highest number of doctorate recipients, Taiwan occupied the top spot for 1979, 1984 and 1989 (table 9). More than two-thirds of the doctorate recipients from Taiwan earned their degrees in engineering and the physical sciences in each of the three years. India had the second largest number of new Ph.D.s in 1979 and 1984, and the third largest number in 1989. Like their counterparts from Taiwan, the most common program areas among Asian Indian doctorate recipients were engineering and the physical sciences, as it was for most of the top 20 countries for the three years specified.

Time-to-degree

- Ten or more years elapsed from year of baccalaureate to year of doctorate for 56.8 percent of the 1989 graduates (table 12). Ten or more years elapsed for 90.1 percent of education doctorate recipients, the highest percentage of the 11 program areas.

Economic characteristics and financial support

- In 1989, more than one-half (50.5 percent) of doctorate recipients had no dependents and 16.4 percent had three or more (table 5.1). In 1979, these figures were 44.5 percent and 20.1 percent, respectively (table 3.1).

- Education doctorate recipients were more likely than those in other program areas to have three or more dependents—27.2 percent in 1989, 33.7 percent in 1984, and 37.2 percent in 1979 (tables 3.2, 4.2, and 5.2).

- Two out of five (40.4 percent) of the 1989 Ph.D.s obtained their primary financial support during graduate study from university-related sources (table 13.1). For 36.9 percent, the primary source of financial support was from their own or family resources. For 15.0 percent, the primary source of support was the federal government. Only 3.7 percent of the doctorate recipients used student loans as a primary source of support.

- Two program areas, education and physical sciences, showed very significant differences for primary source of support in 1989 (table 13.1). More than seven out of ten (70.7 percent) education doctorate recipients used their own resources—14.6 percent from university-related sources and 7.8 percent from the federal government. The corresponding figures for the physical sciences were 13.1 percent, 59.9 percent and 20.8 percent, respectively.

- More than one-half (52.9 percent) of the 1989 doctorate recipients reported no educational debt at time of graduation (table 12). Sixty-five percent of engineering graduates had no debt. On the other hand, more than 60 percent of social science graduates had some debt and more than 15 percent had an outstanding debt of $20,000 or more at the time of graduation.

Postgraduation employment plans

- Fifty percent of the 1989 doctorate recipients planned to work in academe (a 4-year college) and another 17.9 percent planned to work in business or industry (table 10.3). The top primary activity anticipated was teaching, followed by research and development. The same pattern of work plans was displayed by the 1979 and 1984 cohorts of doctorate recipients (tables 10.1 and 10.2). The percentage of those who planned to work in the federal government decreased from 6.3 percent in 1979 to 5.0 percent in 1989.

Education doctorate recipients

- In 1979, there were 7,385 education doctorate recipients; from 1980 to 1989, the numbers decreased annually from 7,586 in 1980 to 6,276 in 1989 (table 15). Although the number of female graduates in education increased by 16.1 percent from 1979 to 1989, the number of male graduates dropped by 37.6 percent during this same time period. With a few exceptions, notably agricultural and music education, the drop in the number of graduates was evident in all fields of specialization within education.
- During the three specified years (1979, 1984 and 1989), both white and black education doctorate recipients were more likely to have specialized in educational administration and supervision than any other specialty in education (tables 14.1, 14.2, and 14.3). Preferred fields for both Asian and Hispanic education doctorate recipients were: curriculum and instruction; and educational administration and supervision.
- Decreases in the number of education doctorate recipients were evident among blacks, whites, Hispanics and American Indians. Only Asians registered an increase in the number of education doctorate recipients from 1979 to 1989, increasing by 53.0 percent (tables 14.1, 14.2, and 14.3).

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Introduction

The data presented in these tables show the demographic characteristics of doctorate recipients such as sex, age, race/ethnicity, marital status, citizenship (tables 1.0–8.2); the program areas and fields of specialization in education (tables 14.1–14.3, 15); the personal background characteristics of dependents and educational attainment of parents (tables 3.1–5.2); and economic variables, including sources of support during graduate study, amount of debt outstanding at time of graduation, and postgraduation employment plans (tables 10.1–13.2).

Major field of study is grouped into 11 program areas for presentation in this report. They are:

Biological and agricultural sciences,
Business,
Education,
Engineering,
Fine, applied and performing arts,
Health sciences,
History,
Humanities,
Physical sciences,
Social sciences, and
Other.

Education is further subdivided into four areas:

Nonteaching fields,
Teacher education,
Teaching fields, and
Education, general and other.

Methodology and Technical Notes

The Survey of Earned Doctorates (SED) is sponsored by five federal agencies: U.S. Department of Education, National Science Foundation, National Institutes of Health, National Endowment for the Humanities, and the U.S. Department of Agriculture. This survey is conducted under contract by the National Research Council's Office of Scientific and Engineering Personnel (NRC/OSEP). This survey has been conducted since 1958 and is designed as a complete enumeration of all doctorate recipients (research and applied-research) in all fields. First professional degrees such as the M.D., D.D.S., O.D., D.V.M., and J.D. are not covered in this survey. With the cooperation of graduate deans of United States universities, survey forms are distributed to all research doctorates shortly after completion of requirements for their doctoral degrees.

The Doctorate Records File (DRF) contains information for the first doctorate of an individual. Information for respondents who are reporting their second doctorate is also collected and maintained in another database. Twenty out of 210 second doctorates awarded from 1986 to 1989 were in education.[1]

Data collection

In March of each year the NRC/OSEP current list of the Ph.D. granting institutions is updated by comparing it with the latest issue of the Higher Education Programs (HEP) Directory. If any institution newly awards doctorates, a letter is sent to the graduate dean to ascertain whether the institution qualifies for inclusion in the survey.

Survey questionnaires are mailed to the offices of the graduate deans at the approximately 360 doctorate-granting institutions in the United States, its territories, and possessions. The questionnaires are distributed by the dean's staff to the doctoral candidates at about the time all requirements for the degree are completed. The completed questionnaires (plus a commencement program from the university) are returned by the contact person to NRC/OSEP.

Questionnaires are mailed to nonrespondents. A second followup questionnaire is mailed one month after the first.

File creation and editing

Survey responses are entered directly on-line and a record is created for each doctorate recipient and is assigned a unique and permanent identification number.

A record is processed through a multi-layered edit routine that first verifies the existence of a proper set of records, checks against criteria for the range of values acceptable in each data field and finally reviews the interrelationships among values in the fields.

A computer editing procedure checks records for missing information. For example, if a record is missing one of three critical data items—year of birth, B.A. institution, B.A. year—the computer follows a series of decision trees to determine if a followup letter should be mailed to the individual. Individualized letters are then generated by the computer. These letters request information for these critical missing items as well as for race/ethnicity and citizenship, place of birth, and educational history if this information is also missing.

If a doctorate recipient chooses not to respond, a skeleton record is developed using information from the graduate school and the commencement program. These records usually contain a minimal amount of information such as name, sex, educational history, field of doctorate and year of doctorate. This same procedure was used to create a record of doctorate recipients from 1920 to 1957.

Response rate

In general, the response rate to the survey is high. In 1989, 92.2 percent of new doctorate recipients completed the survey form. During the 10-year period, 1980-1989 the rate of response fluctuated between 91 and 97 percent.

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[1] Number of second doctorates:

(1979) 36	(1983) 38	(1987) 53
(1980) 32	(1984) 53	(1988) 50
(1981) 46	(1985) 52	(1989) 59

Item nonresponse rates for 1989 are shown below. Percentage distributions presented in this report were calculated on the basis of the number of individuals for whom a particular characteristic was known.

Item Nonresponse rates: 1989

Data item	Nonresponse rate (%)
Baccalaureate field	9.7
Baccalaureate year(for time-to-Ph.D.	6.8
Birth year (for age)	7.6
Citizenship	7.7
Country of citizenship	9.9 (of non-U.S. citizens)
Cumulative debt (yes or no)	9.2
Cumulative debt level	0.7 (of Ph.D.s with debt)
Dependents	14.3
Doctorate field	0.0
Doctorate institution	0.0
Doctorate year	0.0
Gender	0.0
Marital status	9.0
Father's education	11.7
Mother's education	12.5
Postdoctoral employer type	3.9 (of Ph.D.s to be employed)
Primary work activity	7.6 (of Ph.D.s to be employed)
Secondary work activity	41.1
Race/ethnicity	8.9
Sources of graduate school support	9.8
Years not enrolled from: (for time-to-Ph.D.) baccalaureate to graduate entrance	11.7

Definitions of variables presented in this report

Academic year

An academic year starts at July 1 of one year and ends June 30 of the following year. In this report, academic years are referred to by the year in which they end (e.g. academic year 1988–89 is shown as 1989).

Age at doctorate

A recipient's age is derived by subtracting the year of birth from the calendar year of doctorate.

Program area

History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Programs (CIP), history is included under social sciences, and fine, applied, and performing arts a separate program area. Physical sciences include mathematics and computer science.

The major field of study of the doctorate recipients are divided into 11 program areas:

Biological and agricultural sciences

Includes: biochemistry, biophysics, bacteriology, plant genetics, plant pathology, plant physiology, anatomy, biometrics and biostatistics, cell biology, ecology, developmental biology/embryology, endocrinology, entomology, immunology, molecular biology, microbiology, neurosciences, parasitology, toxicology, human and animal

genetics/pathology/pharmacology/physiology, zoology, general and other biological sciences; agricultural economics, agricultural business and management, animal breeding & genetics, animal nutrition, dairy/poultry/fisheries and animal sciences, agronomy, plant breeding and genetics, pathology/protection/pest management science, food distribution/engineering/sciences, soil chemistry/micrand biology, soil sciences, horticulture science, forest biology/engineering/management, wood science, renewable natural resources, forestry and related science, wildlife/range management, general and other agricultural sciences.

Business

Includes: accounting, banking and finance, business administration and management, business economics, marketing management and research, business statistics, operations research, organizational behaviour, general and other business and management.

Education

Includes: curriculum and instruction, educational administration supervision/media/statistics and research/testing, evaluation and measurement/psychology, school psychology, social foundations, special education, student counseling and personnel services, higher education research; teacher education such as pre-elementary, elementary, secondary, adult and consulting; teaching fields majoring in agricultural/art/business/english/foreign languages/health/home economics/industrial arts/mathematics/music/nursing/physical/reading/science/social science/speech/trade and industrial education, teacher and education specific subject areas, general and other.

Engineering

Includes: aerospace, aeronautical and astronautical, agricultural, bioengineering and biomedical, ceramic, chemical, civil, communications, computer, electrical, electronics, engineering mechanics/physics/science, environmental health engineering, industrial, materials science, mechanical, metallurgical, mining and mineral, naval architecture and marine engineering, nuclear, ocean, operations research, petroleum, polymer, systems, general and other engineering.

Fine, applied, performing arts

Includes: art history and criticism, music and theatre.

Health sciences

Includes: audiology and speech pathology, environmental health, public health, epidemiology, nursing, pharmacy, veterinary medicine, general and other health sciences.

History

Includes: American and European history, history of science, general and other history.

Humanities

Includes: classics, comparative literature, linguistics, American and English literature, English language, speech and debate, letters-general and other; French, German, Italian, Spanish, Russian, Slavic (not Russian), Chinese, Japanese, Hebrew, Arabic and other languages; American studies, archaelogy, philosophy, religion, general and other humanities.

Physical sciences

Includes: computer sciences, information science and systems; applied mathematics, algebra, analysis and functional analysis, geometry, logic, number theory, topology, computing theory and practice, operations research, general and other mathematics; astronomy, astrophysics, atmospheric physics and chemistry, atmospheric dynamics, meteorology, general atmosphere and meteorological science and other; chemistry—analytical, inorganic, nuclear, organic, pharmaceutical, physical, polymer, theoretical, general and other; geological sciences—geology, geochemistry, geophysics and seismology, paleontology, mineralogy, petrology, stratigraphy, sedimentation, geomorphology and glacial geology, applied geology, general and other geological sciences; physics—acoustics,

atomic and molecular, electron, elementary particle, fluids, nuclear, optics plasma, polymer, solid state, general and other; environmental sciences, hydrology and water resources, oceanography, marine sciences and other physical sciences.

Social sciences

Includes: anthropology, area studies, criminology, demography, economics, econometrics, geography, international relations, political science and government, public policy studies, sociology, statistics, urban studies, general and other social sciences.

Other

Includes: communications research, journalism, radio and television, general and other communications; architectural and environmental design, home economics, law, library and archival science, public administration, social work, theology, general and other professional fields.

Time-to-degree

Total time-to-degree (TTD) is a gross measure and refers to the number of years elapsed between earning the baccalaureate and the doctorate.

Citizenship

A United States citizen may be native-born or naturalized and non-U.S. citizens are either permanent or temporary (student visa) residents.

Dependent

A dependent is someone who is receiving at least one-half of his/her support from the doctorate recipient.

Educational institutions (employment plans)

Four-year college or university other than medical school: Institutions that offer baccalureate and, possibly, higher degree programs.

Medical school: Includes: university hospitals and medical schools.

Junior or community college: These are either publicly or privately controlled institutions that offer certificate or degree programs through the Associate of Arts level and, with few exceptions, no baccalaureate programs.

Elementary or secondary school: These institutions are either private or public elementary or secondary institutions.

Level of indebtedness

The amount of debt reported is outstanding debt; that is the amount of money owed at the time of graduation with a doctoral degree due to undergraduate and graduate educational expenses.

Student financial aid

Consists of grants, loans, work-study, and other forms of aid (for example, employer-paid tuition payments) from sources other than the family or student to help the student pay for postsecondary education.

Federal aid

Student financial aid whose source is the federal government. This aid can either be provided by or administered by a federal agency. Federal agencies providing aid include the Department of Education, Department of Health and Human Services, Department of Defense, Veterans administration, and the National Science Foundation. Federal aid can be in the form of grants, loans, and work-aid study.

Title IV aid programs

Those federal student financial aid programs administered by the Department of Education and authorized under Title IV of the Higher Education Act of 1965, as amended. Title IV programs include Pell Grants, Stafford Loans (formerly Guaranteed Student Loans or GSLs), Supplemental Educational Opportunity Grants (SEOG), College Work-Study, Parent loans (PLUS), Supplemental Loans for Students (SLS,formerly ALAS) State Student Incentive Grants (SSIG), and the TRIO programs. (Many of these programs do not support graduate students).

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For More Information

For more information about this report, contact Teresita L. Chan Kopka, Postsecondary Education Statistics Division, National Center for Education Statistics, U.S. Department of Education, 555 New Jersey Avenue NW, Washington, DC, 20208, telephone (202) 219–1771.

Table 1.--Total and education doctorate recipients by sex, and academic year: 1966-1989

Academic Year	Number of doctorates						Education as a percentage of total		
	Total			Education					
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1966	17,949	15,863	2,086	3,040	2,461	579	16.9	15.5	27.8
1967	20,403	17,961	2,442	3,481	2,791	690	17.1	15.5	28.3
1968	22,936	20,004	2,932	4,029	3,228	801	17.6	16.1	27.3
1969	25,743	22,355	3,388	4,659	3,753	906	18.1	16.8	26.7
1970	29,498	25,527	3,971	5,857	4,671	1,186	19.9	18.3	29.9
1971	31,867	27,271	4,596	6,435	5,089	1,346	20.2	18.7	29.3
1972	33,041	27,754	5,287	7,085	5,439	1,646	21.4	19.6	31.1
1973	33,755	27,670	6,085	7,238	5,455	1,783	21.4	19.7	29.3
1974	33,047	26,594	6,453	7,241	5,302	1,939	21.9	19.9	30.0
1975	32,952	25,751	7,201	7,360	5,065	2,295	22.3	19.7	31.9
1976	32,946	25,262	7,684	7,725	5,185	2,540	23.4	20.5	33.1
1977	31,716	23,858	7,858	7,455	4,870	2,585	23.5	20.4	32.9
1978	30,875	22,553	8,322	7,194	4,339	2,855	23.3	19.2	34.3
1979	31,239	22,302	8,937	7,385	4,277	3,108	23.6	19.2	34.8
1980	31,020	21,612	9,408	7,586	4,203	3,383	24.5	19.4	36.0
1981	31,357	21,465	9,892	7,497	3,957	3,540	23.9	18.4	35.8
1982	31,111	21,018	10,093	7,251	3,712	3,539	23.3	17.7	35.1
1983	31,282	20,749	10,533	7,174	3,555	3,619	22.9	17.1	34.4
1984	31,337	20,638	10,699	6,808	3,337	3,471	21.7	16.2	32.4
1985	31,297	20,553	10,744	6,733	3,242	3,491	21.5	15.8	32.5
1986	31,895	20,591	11,304	6,645	3,034	3,611	20.8	14.7	31.9
1987	32,364	20,938	11,426	6,450	2,897	3,553	19.9	13.8	31.1
1988	33,490	21,679	11,811	6,357	2,846	3,511	19.0	13.1	29.7
1989	34,319	21,811	12,508	6,276	2,669	3,607	18.3	12.2	28.8

Note: Academic years are referred to by the year in which they end. For example, academic year 1965-66 is referred to as 1966.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1966-1989.

Table 2.--Percentage distribution of doctorate recipients by program area, sex, race/ethnicity, citizenship, and age: 1979, 1984, 1989

Program Area	1979	1984	1989
Total	31,239	31,337	34,319
	100.0	100.0	100.0
Biological & agricultural sciences	14.9	16.1	15.6
Business	2.3	2.8	3.1
Education	23.6	21.7	18.3
Engineering	8.0	9.3	13.2
Fine arts1/	2.2	2.2	2.2
Health sciences	1.8	2.3	2.8
History1/	2.7	2.0	1.6
Humanities	8.4	7.1	6.6
Physical sciences2/	13.8	14.2	15.9
Social sciences	19.1	18.9	17.4
Other	3.3	3.4	3.3
Sex			
Male	22,302	20,638	21,809
	100.0	100.0	100.0
Biological & agricultural sciences	16.2	17.7	16.4
Business	2.8	3.3	3.6
Education	19.2	16.2	12.2
Engineering	10.9	13.4	19.1
Fine arts1/	1.9	1.9	2.0
Health sciences	1.5	1.5	1.6
History1/	2.8	2.0	1.6
Humanities	6.8	5.5	5.3
Physical sciences2/	17.1	18.4	20.3
Social sciences	17.8	17.0	15.0
Other	3.1	3.1	2.9
Female	8,937	10,699	12,510
	100.0	100.0	100.0
Bilogical & agricultural sciences	1.7	12.9	14.4
Business	1.0	1.7	2.2
Education	34.8	32.4	28.8
Engineering	0.7	1.4	3.0
Fine arts1/	2.9	2.7	2.5
Health sciences	2.6	3.9	5.0
History1/	2.4	1.9	1.4
Humanities	12.5	10.2	9.0
Physical sciences2/	5.5	6.1	8.2
Social sciences	22.3	22.7	21.5
Other	3.6	4.0	3.9

See footnotes at end of table.

Table 2.--Percentage distribution of doctorate recipients by program area, sex, race/ethnicity, citizenship, and age: 1979, 1984, 1989--Continued

Program Area	1979	1984	1989
Race/ethnicity	8,713	29,282	30,943
American Indian or Alaskan	84	74	94
	100.0	100.0	100.0
Biological & agricultural sciences	3.6	14.9	9.6
Business	1.2	2.7	1.1
Education	50.0	44.6	26.6
Engineering	4.8	4.1	7.4
Fine arts1/	2.4	0.0	0.0
Health sciences	0.0	1.4	3.2
History1/	3.6	2.7	1.1
Humanities	6.0	4.1	6.4
Physical sciences2/	4.8	9.5	19.1
Social sciences	20.2	13.5	19.1
Other	3.6	2.7	6.4
Asian and Pacific Islander	2,602	3,394	5,182
	100.0	100.0	100.0
Biological & agricultural sciences	18.0	15.0	14.6
Business	2.2	4.1	4.7
Education	8.3	8.5	6.4
Engineering	27.7	30.3	31.4
Fine arts1/	0.6	0.5	1.1
Health sciences	2.0	1.9	1.8
History1/	0.7	0.7	0.6
Humanities	3.5	2.7	2.3
Physical sciences2/	22.6	23.3	24.4
Social sciences	11.8	11.3	10.8
Other	2.5	1.8	1.9
Black	1,445	1,494	1,246
	100.0	100.0	100.0
Biological & agricultural sciences	7.5	10.6	11.4
Business	1.7	1.6	2.2
Education	46.3	42.4	39.2
Engineering	3.7	4.6	4.7
Fine arts1/	1.1	1.3	0.8
Health sciences	2.2	2.3	3.3
History1/	3.0	2.0	1.6
Humanities	6.2	5.4	5.2
Physical sciences2/	5.0	5.3	5.5
Social sciences	17.6	19.2	20.5
Other	5.5	5.4	5.6

See footnotes at end of table.

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Table 2.--Percentage distribution of doctorate recipients by program area, sex, race/ethnicity, citizenship, and age: 1979, 1984, 1989--Continued

Program Area	1979	1984	1989
Hispanic	900	918	1,064
	100.0	100.0	100.0
Biological & agricultural sciences	17.7	13.8	19.6
Business	1.2	1.6	1.2
Education	23.8	20.5	18.2
Engineering	9.6	8.8	11.1
Fine arts1/	0.9	0.9	1.0
Health sciences	1.1	1.9	1.5
History1/	2.2	1.3	1.6
Humanities	13.1	11.9	9.8
Physical sciences2/	11.7	15.3	14.2
Social sciences	16.9	20.9	19.3
Other	1.9	3.2	2.4
White	23,682	23,402	23,357
	100.0	100.0	100.0
Biological & agricultural sciences	15.0	16.8	16.3
Business	2.4	2.6	2.9
Education	24.0	22.8	20.3
Engineering	6.0	6.4	9.5
Fine arts1/	2.5	2.5	2.5
Health sciences	1.8	2.4	3.1
History1/	2.8	2.2	1.8
Humanities	8.9	7.6	7.5
Physical sciences2/	13.4	13.6	14.5
Social sciences	19.9	19.7	18.0
Other	3.3	3.5	3.4
Citizenship	30,371	30,083	31,672
U.S. citizen	25,464	24,027	23,398
	100.0	100.0	100.0
Biological & agricultural sciences	14.7	16.6	16.3
Business	2.1	2.4	2.8
Education	25.8	24.6	22.4
Engineering	5.1	5.2	8.0
Fine arts1/	2.4	2.5	2.5
Health sciences	1.8	2.4	3.1
History1/	3.0	2.3	1.9
Humanities	9.0	2.4	7.3
Physical sciences2/	12.9	13.0	13.8
Social sciences	19.9	19.9	18.4
Other	3.3	3.6	3.5

See footnotes at end of table.

Table 2.--Percentage distribution of doctorate recipients by program area, sex, race/ethnicity, citizenship, and age: 1979, 1984, 1989--Continued

Program Area	1979	1984	1989
Non-U.S. citizen	4,907	6,056	8,274
	100.0	100.0	100.0
Biological & agricultural sciences	16.3	14.9	15.2
Business	3.2	4.2	4.0
Education	12.2	11.1	7.4
Engineering	23.2	25.5	27.9
Fine arts1/	0.8	0.7	1.1
Health sciences	1.9	1.8	1.9
History1/	1.2	0.8	0.9
Humanities	5.3	5.1	4.7
Physical sciences2/	18.9	19.6	21.8
Social sciences	14.0	13.7	12.7
Other	3.0	2.7	2.4
Age at Ph.D.	30,510	30,171	31,708
Median age	31.9	33.0	33.9
Biological & agricultural sciences	29.9	30.6	31.7
Business	33.2	34.4	35.1
Education	36.5	38.4	41.1
Engineering	30.3	30.7	31.2
Fine arts1/	33.4	34.6	35.5
Health sciences	32.2	34.0	36.7
History1/	33.0	35.2	36.0
Humanities	32.9	34.3	35.8
Physical sciences2/	29.0	29.7	30.2
Social sciences	31.4	32.8	33.9
Other	35.2	36.8	38.4

1/ History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

2/ Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1979, 1984, 1989.

Table 3.1-Percentage distribution of doctorate recipients by selected demographic and background characteristics within program area: 1979

Characteristic	All Program Areas	Biological/ Agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	31,239	4,655	715	7,485	2,438	682	568	829	2,630	4,299	5,461	1,025
Sex	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	71.4	77.6	87.3	57.9	97.5	62.3	59.7	74.1	57.4	88.5	66.6	68.3
Female	28.6	22.4	12.7	42.1	2.5	37.7	40.3	25.9	42.6	11.5	33.4	31.7
Race/ethnicity	28,713	4,301	664	6,817	2,296	627	514	757	2,409	3,936	5,443	949
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Am Indian or Alaskan	0.3	0.1	0.2	0.6	0.2	0.3	0.0	0.4	0.2	0.1	0.3	0.3
Asian or Pacific Islander	9.1	10.9	8.4	3.7	31.4	2.6	10.3	2.4	3.8	14.9	5.7	6.7
Black	5.0	2.5	3.8	9.8	2.4	2.6	6.2	5.8	3.7	1.8	4.7	8.4
Hispanic	3.1	3.3	1.7	3.1	3.7	1.3	1.3	2.6	4.9	2.7	2.8	1.8
White	82.5	82.8	86.0	83.2	62.4	93.3	81.5	88.8	87.3	80.5	86.6	82.7
Age at Ph.D.	30,510	4,564	702	7,188	2,445	657	549	813	2,558	4,235	5,392	1,009
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
24 or younger	5.1	7.7	2.1	0.9	8.0	2.1	3.1	2.0	2.0	12.3	5.9	2.8
25-29	24.9	48.1	15.1	8.3	52.7	15.1	24.4	16.7	18.1	49.1	26.6	13.2
30-34	35.7	37.8	42.5	29.1	31.5	39.6	37.9	40.5	40.0	32.8	34.0	30.4
35-39	17.5	10.4	21.5	25.4	12.4	23.0	18.8	23.2	20.8	8.3	17.2	25.2
40-45	9.0	3.6	11.0	17.9	3.6	11.4	10.0	9.3	10.7	2.6	6.6	15.5
46 or older	7.6	3.6	7.8	18.4	2.0	8.8	5.8	8.2	8.3	0.9	4.6	13.1
Median age	31.9	29.9	33.2	36.5	30.3	33.4	32.2	33.0	32.9	29.8	31.4	35.2
Marital status	29,834	4,465	686	7,075	2,393	644	531	782	2,471	4,146	5,445	986
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Married	65.3	65.6	75.9	72.6	67.4	61.3	65.2	64.4	62.5	58.2	60.9	68.5
Not married	34.7	34.4	24.1	27.4	32.6	38.7	34.8	35.6	37.5	41.8	39.5	31.5
Citizenship	30,371	4,545	699	7,266	2,430	657	543	811	2,541	4,216	5,761	1,002
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
U.S. citizen	93.8	82.4	77.4	91.7	53.2	93.9	89.1	93.0	89.8	78.8	88.1	85.1
Native	80.6	79.7	74.4	89.4	48.7	91.3	79.2	86.1	82.7	74.7	85.2	82.5
Naturalized	3.3	2.7	2.9	2.3	4.5	2.6	9.9	6.8	7.1	4.1	2.9	2.6
Non-U.S. citizen	16.2	17.6	22.7	8.3	46.8	6.1	10.9	7.0	10.2	22.0	11.9	14.9
Permanent resident	4.5	3.7	5.3	1.6	11.3	2.3	7.4	2.6	4.8	6.2	5.1	3.6
Temporary resident	11.8	13.9	17.5	6.7	35.5	3.8	3.6	4.4	5.5	15.8	6.8	11.3
Number of dependents	26,748	4,005	652	6,316	2,181	548	478	674	2,138	3,788	5,074	882
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	44.5	47.0	40.4	34.6	36.4	46.9	48.1	49.6	52.2	52.5	51.4	36.3
One	20.2	22.1	19.0	17.5	24.7	20.9	16.3	18.8	18.4	23.2	19.6	18.6
Two	15.2	15.2	20.4	16.2	18.5	16.4	14.4	11.4	14.3	12.8	14.3	15.3
Three or more	20.1	15.7	40.2	31.7	20.4	16.8	21.1	20.2	15.0	11.5	14.8	29.8
Father's education	28,377	4,253	660	6,761	2,253	612	504	754	2,333	3,929	5,196	932
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than high school	25.1	19.7	26.4	37.4	22.1	16.8	25.4	24.8	21.6	19.5	20.5	31.0
High school graduate	24.5	25.8	24.2	25.6	22.8	21.7	27.0	23.5	22.8	4.1	23.7	28.2
Some college	13.6	13.0	15.6	13.6	12.0	15.7	13.7	11.5	13.2	12.9	15.0	12.3
Bachelor's degree	18.8	20.4	20.3	11.5	26.3	18.6	17.5	18.9	19.1	21.0	20.2	15.3
Master's/professional	12.9	14.5	10.6	9.2	12.9	17.2	10.9	13.1	15.6	14.3	14.3	10.6
Ph.D./postdoctoral	5.7	6.7	2.9	2.8	4.3	10.0	5.6	7.6	7.8	8.2	6.3	4.5

See footnotes at end of table.

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Table 3.1-Percentage distribution of doctorate recipients by selected demographic and background characteristics within program area: 1979 -Continued

Characteristic	All Program Areas	Biological/ Agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Mother's education	28,158	4,206	665	6,736	2,226	615	96	759	2,294	3,888	5,340	923
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than high school	22.8	18.8	25.3	30.9	30.6	12.2	24.8	19.8	18.7	18.2	18.2	27.1
High school graduate	36.3	37.6	35.6	35.7	34.9	31.9	34.7	35.6	33.6	38.2	36.9	38.1
Some college	17.4	17.6	16.7	17.5	13.3	19.5	18.1	17.3	17.8	16.3	19.3	18.0
Bachelor's	15.9	17.8	17.3	11.5	14.5	24.6	16.3	18.4	19.5	18.2	16.6	10.8
Master's/professional	6.8	7.6	4.7	4.1	6.1	10.6	5.4	7.8	9.2	8.3	7.9	5.4
Ph.D./postdoctoral	0.8	0.7	0.5	0.3	0.5	1.3	0.6	1.2	1.3	0.9	1.2	0.5

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates: 1979.

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Table 3.2--Percentage distribution of doctorate recipients with selected background characteristics by program area: 1979

Characteristic	Number of respondents	All Program Areas	Biological/ Agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	31,239	100.0	14.9	2.3	23.6	8.0	2.2	1.8	2.7	8.4	13.8	19.1	3.3
Sex													
Male	22,302	100.0	16.2	2.8	19.2	10.9	1.9	1.5	2.8	6.8	17.1	17.8	3.1
Female	8,937	100.0	11.7	1.0	34.8	0.7	2.9	2.6	2.4	12.5	5.5	22.3	3.6
Race/ethnicity													
Am Indian or Alaskan	84	100.0	3.6	1.2	50.0	4.8	2.4	0.0	3.6	6.0	4.8	20.2	3.6
Asian or Pacific Islander	2,602	100.0	18.0	2.2	8.3	27.7	0.6	2.0	0.7	3.5	22.6	11.8	2.5
Black	1,445	100.0	7.5	1.7	46.3	3.7	1.1	2.2	3.0	6.2	5.0	17.6	5.5
Hispanic	900	100.0	17.7	1.2	23.8	9.6	0.9	1.1	2.2	13.1	11.7	16.9	1.9
White	23,682	100.0	15.0	2.4	24.0	6.0	2.5	1.8	2.8	8.9	13.4	19.9	3.3
Unknown	2,526	100.0	14.0	2.0	22.5	7.7	2.2	2.1	2.9	8.7	14.4	20.5	3.0
Age													
26 or younger	1,616	100.0	21.7	0.9	4.0	12.1	0.9	1.1	1.0	3.2	32.2	21.3	1.7
27-29	7,601	100.0	23.2	1.4	7.9	10.5	1.3	1.8	1.8	6.1	24.0	20.2	1.7
30-34	10,903	100.0	15.8	2.7	19.2	9.3	2.4	1.9	3.0	9.4	12.7	20.7	2.8
35-39	5,332	100.0	8.9	2.8	34.2	5.7	2.8	1.9	3.5	10.0	6.6	18.7	4.8
40-45	2,754	100.0	6.4	2.8	46.6	3.2	2.7	2.0	2.8	9.9	4.0	13.9	5.7
46 or older	2,304	100.0	3.1	2.4	57.5	2.1	2.5	1.4	2.9	9.2	1.7	11.5	5.7
Unknown	729	100.0	12.5	1.8	27.0	6.4	3.4	2.6	2.2	9.9	8.8	23.2	2.2
Marital status													
Married	19,496	100.0	15.0	2.7	26.3	8.3	2.0	1.8	2.6	7.9	12.4	17.5	3.5
Not married	10,338	100.0	14.8	1.6	18.8	7.5	2.4	1.8	2.7	9.0	16.8	21.6	3.0
Unknown	1,405	100.0	13.5	2.1	22.1	6.9	2.7	2.6	2.6	11.3	10.9	22.5	2.8
Citizenship													
U.S. citizen	25,464	100.0	14.7	2.1	25.8	5.1	2.4	1.8	3.0	9.0	12.9	19.9	3.3
Native	24,465	100.0	14.8	2.1	26.2	4.8	2.5	1.8	3.0	8.6	12.9	20.1	3.4
Naturalized	999	100.0	12.3	2.0	16.5	10.9	1.7	2.1	3.1	18.0	13.9	16.8	2.6
Non-U.S. citizen	4,907	100.0	16.3	3.2	12.2	23.2	0.8	1.9	1.2	5.3	18.9	14.0	3.0
Permanent resident	1,320	100.0	12.7	2.8	8.9	24.4	1.1	3.0	1.6	9.2	19.8	13.7	2.7
Temporary resident	3,587	100.0	17.6	3.4	13.4	22.7	0.7	1.4	1.0	3.9	18.6	14.1	3.2
Unknown	868	100.0	12.7	1.8	25.2	6.9	2.9	2.9	2.1	10.3	9.6	23.0	2.6

See footnotes at end of table.

Table 3.2--Percentage distribution of doctorate recipients with selected background characteristics by program area: 1979--Continued

Characteristic	Number of respondents	All Program Areas	Biological/ Agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Number of dependents													
None	11,911	100.0	15.8	1.7	18.3	6.7	2.2	1.9	2.8	9.4	16.7	21.9	2.7
One	5,395	100.0	16.4	2.3	20.5	10.0	2.0	1.4	2.4	7.3	16.3	18.4	3.0
Two	4,059	100.0	15.0	3.3	25.3	9.9	2.2	1.7	1.9	7.5	11.9	17.9	3.3
Three or more	5,373	100.0	11.7	3.7	37.2	8.3	1.7	1.9	2.5	6.0	8.1	14.0	4.9
Unknown	4,501	100.0	14.4	1.4	23.7	6.9	3.0	2.0	3.4	10.9	11.4	19.7	3.2
Father's education													
Less than high school	7,112	100.0	11.8	2.4	35.5	7.0	1.4	1.8	2.6	7.1	10.8	15.6	4.1
High school graduate	6,943	100.0	15.8	2.3	24.9	7.3	1.9	2.0	2.5	7.7	13.6	18.5	3.5
Some college	3,833	100.0	14.4	2.7	23.9	7.1	2.5	1.8	2.3	8.0	13.3	21.1	3.0
Bachelor's	5,223	100.0	16.6	2.6	14.8	11.3	2.2	1.7	2.9	8.5	15.8	20.9	2.7
Master's/professional	3,650	100.0	16.9	1.9	17.0	8.0	2.9	1.5	2.7	9.9	15.4	21.1	2.7
Ph.D./postdoctoral	1,616	100.0	17.5	1.2	11.5	6.1	3.8	1.7	3.5	11.2	19.9	21.0	2.6
Unknown	2,862	100.0	14.0	1.9	22.2	8.3	2.4	2.2	2.6	10.4	12.9	19.7	3.2
Mother's education													
Less than high school	6,426	100.0	12.3	2.6	32.4	10.6	1.2	1.9	2.3	6.7	11.0	15.1	3.9
High school graduate	10,218	100.0	15.5	2.3	23.5	7.6	1.9	1.7	2.6	7.5	14.6	19.3	3.4
Some college	4,906	100.0	15.1	2.3	24.1	6.1	2.4	1.8	2.7	8.3	12.9	21.0	3.4
Bachelor's	4,477	100.0	16.7	2.6	17.4	7.2	3.4	1.8	3.1	10.0	15.8	19.8	2.2
Master's/professional	1,915	100.0	16.7	1.6	14.3	7.1	3.4	1.4	3.1	11.0	16.9	22.0	2.6
Ph.D./postdoctoral	216	100.0	13.0	1.4	10.6	5.6	3.7	1.4	4.2	13.4	15.7	28.7	2.3
Unknown	3,081	100.0	14.6	1.6	21.1	8.6	2.2	2.3	2.3	10.9	13.0	20.2	3.3

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Source: U. S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates: 1979.

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Table 4.1--Percentage distribution of doctorate recipients by selected demographic and background characteristics within program area: 1984

Characteristic	All Program Areas	Biological/ Agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	31,337	5,035	869	6,808	2,913	687	722	617	2,232	4,452	5,930	1,072
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	65.9	72.7	79.3	49.0	94.8	57.5	42.4	66.5	51.2	85.2	59.1	59.7
Female	34.1	27.3	20.7	51.0	5.2	42.5	57.6	33.5	48.8	14.8	40.9	40.3
Race/ethnicity	29,282	4,728	799	6,469	2,689	626	672	571	2,070	4,198	5,479	981
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Am Indian or Alaskan	0.3	0.2	0.3	0.5	0.1	0.0	0.1	0.4	0.1	0.2	0.2	0.2
Asian or Pacific Islander	11.6	10.7	17.3	4.4	38.3	2.6	9.8	4.0	4.4	18.9	7.0	6.2
Black	5.1	3.4	3.0	9.8	2.5	3.0	5.1	5.3	3.9	1.9	5.2	8.2
Hispan	3.1	2.7	1.9	2.9	3.0	1.3	2.5	2.1	5.3	3.3	3.5	3.0
White	79.9	83.0	77.6	82.3	56.1	93.1	82.4	88.3	86.3	75.8	84.1	82.5
Age	30,171	4,904	822	6,604	2,784	648	694	595	2,131	4,338	5,630	1,021
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
26 or younger	2.9	3.5	1.2	0.1	6.1	0.6	0.7	0.5	1.0	7.5	2.7	1.1
27-29	20.4	32.5	14.0	3.1	30.5	13.3	14.4	8.1	10.6	40.7	19.3	6.1
30-34	35.6	43.5	35.3	21.3	43.0	35.5	38.8	37.1	39.5	37.0	39.9	28.9
35-39	21.8	14.8	30.3	31.5	14.5	29.6	24.9	29.4	26.1	10.9	22.2	29.3
40-45	11.3	4.2	11.6	23.4	3.7	12.5	14.0	15.0	13.2	2.9	10.4	19.9
46 or older	8.0	1.5	7.7	20.5	2.3	8.5	7.2	9.9	9.6	1.0	5.5	14.8
Median age	33.0	30.6	34.4	38.4	30.7	34.6	34.0	35.2	34.3	29.7	32.8	36.8
Marital status	29,606	4,809	805	6,513	2,724	637	683	578	2,080	4,263	5,525	989
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Married	61.9	60.5	68.7	69.8	62.8	55.4	61.6	65.4	58.8	54.0	59.0	67.7
Not married	38.1	39.5	31.3	30.2	37.2	44.6	38.4	34.6	41.2	46.0	41.0	32.3
Citizenship	30,083	4,887	831	6,582	2,782	644	692	591	2,124	4,318	5,612	1,020
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
U.S.citizen	79.9	81.5	69.7	89.8	44.5	93.3	84.1	92.0	85.5	72.5	85.2	84.0
Native	76.5	78.5	66.4	87.3	40.4	90.7	80.2	88.8	79.7	68.7	82.1	81.0
Naturalized	3.4	3.0	3.2	2.5	4.2	2.6	3.9	3.2	5.8	3.8	3.1	3.0

See footnotes at end of table.

Table 4.1--Percentage distribution of doctorate recipients by selected demographic and background characteristics within program area: 1984--Continued

Characteristic	All Program Areas	Biological/ Agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Non-U.S. citizen	20.1	18.5	30.3	10.2	55.5	6.7	15.9	8.0	14.5	27.5	14.8	16.0
Permanent resident	4.1	3.2	7.8	2.0	9.8	2.3	5.1	3.2	5.2	4.6	3.5	2.5
Temporary resident	16.1	15.3	22.5	8.2	45.6	4.3	10.8	4.7	9.2	23.0	11.3	13.4
Number of dependents	27,981	4,545	776	6,184	2,585	579	644	537	1,892	4,051	5,245	943
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	49.3	54.7	36.9	37.0	42.5	59.2	51.6	51.0	55.7	57.5	55.4	42.1
One	17.9	17.7	18.8	17.8	18.6	15.7	17.5	17.9	16.4	19.2	17.6	16.2
Two	15.7	14.2	20.4	19.0	18.8	10.4	15.7	13.8	13.8	13.3	14.1	15.5
Three or more	17.2	13.4	24.0	26.2	20.1	14.7	15.2	17.3	14.2	10.1	12.9	26.2
Father's education	28,282	4,608	777	6,231	2,595	605	652	552	1,969	4,058	5,294	941
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than high school	22.0	17.5	21.8	34.0	20.3	14.5	22.5	21.4	18.3	15.3	18.9	27.1
High school graduate	23.7	23.7	22.3	26.0	22.0	22.5	26.2	20.8	21.2	22.6	23.9	24.0
Some college	12.6	13.0	13.3	13.3	10.3	10.6	15.3	13.9	12.7	11.7	12.9	13.3
Bachelor's	20.4	22.3	21.0	13.8	26.1	23.5	18.9	17.6	22.4	24.4	20.2	18.6
Master's/professional	14.4	15.7	16.5	10.0	14.3	18.2	12.9	17.6	16.5	15.9	16.4	11.9
Ph.D./postdoctoral	6.9	7.8	5.3	3.0	7.0	10.7	4.1	8.7	8.9	10.0	7.7	5.1
Mother's education	27,993	4,562	763	6,186	2,538	603	644	550	1,951	4,000	5,259	937
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than high school	21.6	17.2	22.0	29.3	30.8	10.9	19.3	17.8	18.1	17.5	17.6	25.4
High school graduate	34.9	36.0	39.2	35.0	33.4	32.8	39.6	33.5	32.3	34.8	34.7	34.9
Some college	17.0	17.2	14.9	17.3	12.2	18.7	19.4	18.0	17.3	16.0	18.9	18.2
Bachelor's	17.2	19.2	15.6	12.3	15.6	24.5	13.0	19.5	20.3	20.3	18.3	15.0
Master's/professional	8.3	9.2	7.7	5.6	7.0	11.8	7.8	10.4	10.4	9.6	9.4	5.8
Ph.D./postdoctoral	1.1	1.2	0.5	0.5	0.9	1.2	0.9	0.9	1.5	1.9	1.2	0.6

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates: 1984.

Table 4.2--Percentage distribution of doctorate recipients with selected background characteristics by program area: 1984

Characteristic	Number of respondents	All Program Areas	Biological/ Agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	31,337	100.0	16.1	2.8	21.7	9.3	2.2	2.3	2.0	7.1	14.2	18.9	3.4
Male	20,638	100.0	17.7	3.3	16.2	13.4	1.9	1.5	2.0	5.5	18.4	17.0	3.1
Female	10,699	100.0	12.9	1.7	32.4	1.4	2.7	3.9	1.9	10.2	6.1	22.7	4.0
Race/ethnicity													
An Indian or Alaskan	74	100.0	14.9	2.7	44.6	4.1	0.0	1.4	2.7	4.1	9.5	13.5	2.7
Asian or Pacific Islander	3,394	100.0	15.0	4.1	8.5	30.3	0.5	1.9	0.7	2.7	23.3	11.3	1.8
Black	1,494	100.0	10.6	1.6	42.4	4.6	1.3	2.3	2.0	5.4	5.3	19.2	5.4
Hispanic	918	100.0	13.8	1.6	20.5	8.8	0.9	1.9	1.3	11.9	15.3	20.9	3.2
White	23,402	100.0	16.8	2.6	22.8	6.4	2.5	2.4	2.2	7.6	13.6	19.7	3.5
Unknown	2,055	100.0	14.9	3.4	16.5	10.9	3.0	2.4	2.2	7.9	12.4	21.9	4.4
Age													
26 or younger	884	100.0	19.7	1.1	1.0	19.1	0.5	0.6	0.3	2.4	36.8	17.3	1.2
27-29	6,145	100.0	26.0	1.9	3.4	13.8	1.4	1.6	0.8	3.7	28.8	17.7	1.0
30-34	10,731	100.0	19.9	2.7	13.1	11.1	2.1	2.5	2.1	7.8	15.0	20.9	2.7
35-39	6,572	100.0	11.0	3.8	31.6	6.1	2.9	2.6	2.7	8.5	7.2	19.0	4.5
40-45	3,412	100.0	6.0	2.8	45.4	3.0	2.4	2.8	2.6	8.3	3.7	17.1	5.9
46 or older	2,427	100.0	3.0	2.6	55.9	2.6	2.3	2.1	2.4	8.4	1.8	12.7	6.2
Unknown	1,166	100.0	11.2	4.0	17.5	11.1	3.3	2.4	1.9	8.7	9.8	25.7	4.4
Marital status													
Married	18,325	100.0	15.9	3.0	24.8	9.3	1.9	2.3	2.1	6.7	12.6	17.8	3.7
Not married	11,281	100.0	16.9	2.2	17.4	9.0	2.5	2.3	1.8	7.6	17.4	20.1	2.8
Unknown	1,731	100.0	13.1	3.7	17.0	10.9	2.9	2.3	2.3	8.8	10.9	23.4	4.8
Citizenship													
U.S. citizen	24,027	100.0	16.6	2.4	24.6	5.2	2.5	2.4	2.3	7.6	13.0	19.9	3.6
Native	23,018	100.0	16.7	2.4	25.0	4.9	2.5	2.4	2.3	7.4	12.9	20.0	3.6
Naturalized	1,009	100.0	14.8	2.7	16.3	11.5	1.7	2.7	1.9	12.3	16.1	17.1	3.1
Non-U.S. citizen	6,056	100.0	14.9	4.2	11.1	25.5	0.7	1.8	0.8	5.1	19.6	13.7	2.7
Permanent resident	1,224	100.0	12.9	5.3	10.6	22.4	1.2	2.9	1.6	9.1	16.1	15.8	2.1
Temporary resident	4,832	100.0	15.4	3.9	11.2	26.3	0.6	1.6	0.6	4.1	20.5	13.1	2.8
Unknown	1,254	100.0	11.8	3.0	18.0	10.4	3.4	2.4	2.1	8.6	10.7	25.4	4.1

See footnotes at end of table.

Table 4.2--Percentage distribution of doctorate recipients with and selected background characteristics, by program area: 1984--(continued)

Characteristic	Number of respondents	All Program Areas	Biological/ Agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Number of dependents													
None	13,787	100.0	18.0	2.1	16.6	8.0	2.5	2.4	2.0	7.6	16.9	21.1	2.9
One	4,997	100.0	16.1	2.9	22.1	9.6	1.8	2.3	1.9	6.2	15.6	18.5	3.1
Two	4,382	100.0	14.7	3.6	26.8	11.1	1.4	2.3	1.7	6.0	12.3	16.9	3.3
Three or more	4,815	100.0	12.7	3.9	33.7	10.8	1.8	2.0	1.9	5.6	8.5	14.1	5.1
Unknown	3,356	100.0	14.6	2.8	18.6	9.8	3.2	2.3	2.4	10.1	11.9	20.4	3.8
Father's education													
Less than high school	6,211	100.0	13.0	2.7	34.1	8.5	1.4	2.4	1.9	5.8	10.0	16.1	4.1
High school graduate	6,703	100.0	16.3	2.6	24.1	8.5	2.0	2.6	1.7	6.2	13.7	18.9	3.4
Some college	3,573	100.0	16.8	2.9	23.2	7.4	1.8	2.8	2.2	7.0	13.3	19.2	3.5
Bachelor's	5,763	100.0	17.8	2.8	14.9	11.8	2.5	2.1	1.7	7.7	17.2	18.5	3.0
Master's/professional	4,084	100.0	17.7	3.1	15.2	9.1	2.7	2.1	2.4	7.9	15.8	21.3	2.7
PhD/postdoctoral	1,948	100.0	18.5	2.1	9.8	9.3	3.3	1.4	2.5	9.0	20.8	20.9	2.5
Unknown	3,055	100.0	14.0	3.0	18.9	10.4	2.7	2.3	2.1	8.6	12.9	20.8	4.3
Mother's education													
Less than high school	6,054	100.0	13.0	2.8	30.0	12.9	1.1	2.0	1.6	5.8	11.5	15.3	3.9
High school graduate	9,762	100.0	16.8	3.1	22.2	8.7	2.0	2.6	1.9	6.5	14.3	18.7	3.3
Some college	4,758	100.0	16.5	2.4	22.5	6.5	2.4	2.6	2.1	7.1	13.5	20.8	3.6
Bachelor's	4,807	100.0	18.3	2.5	15.9	8.3	3.1	1.7	2.2	8.3	16.9	20.0	2.9
Master's/professional	2,313	100.0	18.2	2.6	15.0	7.7	3.1	2.2	2.5	8.8	16.5	21.3	2.3
PhD/postdoctoral	299	100.0	17.7	1.3	10.0	8.0	2.3	2.0	1.7	9.7	24.7	20.4	2.0
Unknown	3,344	100.0	14.1	3.2	18.6	11.2	2.5	2.3	2.0	8.4	13.5	20.1	4.0

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts a separate program area.

[2] Includes mathematics and computer science.

Source: U. S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates: 1984.

Table 5.1--Percentage distribution of doctorate recipients by selected demographic and background characteristics within program area: 1989

Characteristic	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	34,319	5,367	1,068	6,276	4,544	746	974	538	2,270	5,455	5,956	1,125
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	63.6	66.6	74.0	42.5	91.7	58.3	35.4	66.4	50.6	81.1	54.8	56.7
Female	36.4	33.4	26.0	57.5	8.3	41.7	64.6	33.6	49.4	18.9	45.2	43.3
Race/ethnicity	30,943	4,914	970	5,791	4,031	662	877	493	2,054	4,895	5,251	1,005
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Am Indian or Alaskan	0.3	0.2	0.1	0.4	0.2	0.0	0.3	0.2	0.3	0.4	0.3	0.6
Asia or Pacific Islander	16.7	15.4	25.2	5.7	40.4	8.3	10.7	6.7	5.8	25.8	10.6	10.0
Black	4.0	2.9	2.9	8.4	1.4	1.5	4.7	4.1	3.2	1.4	4.9	7.0
Hispanic	3.4	4.3	1.3	3.4	2.9	1.7	1.8	3.4	5.1	3.1	3.9	2.6
White	75.5	77.3	70.5	82.0	55.1	88.5	82.4	85.7	85.6	69.3	80.3	79.9
Age	31,708	5,066	994	5,876	4,170	672	891	512	2,107	5,036	5,360	1,024
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
26 or younger	2.2	2.2	1.2	0.2	4.4	1.3	0.7	0.6	0.5	5.7	1.3	0.4
27-29	18.9	26.9	11.0	2.0	28.8	7.4	7.3	9.2	9.6	36.7	17.6	4.8
30-34	32.4	41.8	33.5	13.0	42.9	33.6	27.9	32.4	30.8	36.9	34.8	24.0
35-39	21.8	19.8	29.6	25.5	17.0	30.8	28.3	27.0	29.1	13.3	23.6	26.8
40-45	14.8	7.3	16.5	31.1	5.1	17.9	22.7	18.9	18.4	5.9	14.5	24.7
46 or older	9.8	1.9	8.2	28.4	1.8	8.9	13.1	11.9	11.5	1.5	8.1	19.3
Median age	33.9	31.7	35.1	41.1	31.2	35.5	36.7	36.0	35.8	30.2	33.9	38.4
Marital status	31,226	4,987	979	5,778	4,109	660	879	503	2,069	4,967	5,289	1,006
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Married	62.5	60.3	71.6	70.1	65.1	58.3	64.5	60.0	59.5	56.7	58.7	66.8
Unmarried	37.5	39.7	28.4	29.9	34.9	41.7	35.5	40.0	40.5	43.3	41.3	33.2
Citizenship	31,672	5,059	995	5,857	4,170	672	890	511	2,099	5,038	5,357	1,024
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
U.S. citizen	73.9	75.2	66.7	89.5	44.7	86.2	81.9	85.7	81.4	64.2	80.4	81.0
Native	70.4	72.4	63.2	86.6	39.5	83.0	79.2	82.8	77.0	60.7	77.2	77.8
Naturalized	3.5	2.7	3.5	2.9	5.2	3.1	2.7	2.9	4.4	3.5	3.2	3.1

See footnotes at end of table.

Table 5.1--Percentage distribution of doctorate recipients by selected demographic and background characteristics within program area: 1989--Continued

Characteristic	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Non-U.S. citizen	26.1	24.8	33.3	10.5	55.3	13.8	18.1	14.3	18.6	35.8	19.6	19.0
Permanent resident	5.1	4.7	6.9	2.8	8.8	4.3	3.0	4.1	7.6	5.3	4.2	5.7
Temporary resident	21.0	20.1	26.3	7.7	46.5	9.5	15.1	10.2	1.0	30.5	15.4	13.4
Number of dependents	29,428	4,714	937	5,495	3,905	615	833	441	1,877	4,692	4,972	947
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	50.5	56.2	37.1	40.0	43.7	59.0	51.1	51.0	55.4	58.7	55.7	40.5
One	17.4	17.0	18.6	17.5	19.0	16.6	17.5	19.3	17.3	17.5	16.3	15.7
Two	15.7	13.3	19.3	18.6	17.4	12.5	17.4	13.2	14.5	13.5	14.9	19.5
Three or more	16.4	13.6	25.0	23.9	19.9	11.9	13.9	16.6	12.8	10.3	13.1	24.2
Father's education	30,289	4,855	953	5,644	3,970	645	852	485	1,996	4,771	5,129	989
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than high school	19.3	14.6	20.9	30.0	18.3	10.2	21.4	18.1	17.1	14.3	18.1	24.1
High school graduate	21.8	20.6	21.2	27.6	18.7	20.6	23.1	19.8	20.5	20.2	21.0	23.6
Some college	11.7	10.4	11.5	13.5	10.0	11.5	14.7	12.0	10.9	10.9	12.6	13.9
Bachelor's	22.2	24.1	23.2	14.4	28.8	23.4	19.6	22.9	22.1	24.7	22.1	20.6
Master's/professional	16.4	20.4	16.6	10.4	15.3	24.5	17.4	17.7	18.4	17.5	17.2	13.2
Ph.D./postdoctoral	8.5	9.9	6.5	4.1	8.8	9.8	3.9	9.5	11.0	12.3	8.9	4.7
Mother's education	30,029	4,813	951	5,606	3,914	641	847	484	1,979	4,727	5,081	986
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than high school	20.3	15.2	22.5	25.5	27.6	9.8	19.8	15.3	15.6	18.3	18.2	23.6
High school graduate	32.8	32.7	35.2	36.9	32.3	27.9	34.6	34.5	29.4	29.6	32.0	36.0
Some college	16.9	17.5	15.6	18.3	12.7	20.9	19.4	15.9	18.8	16.2	17.6	15.8
Bachelor's	18.6	21.9	17.4	12.7	18.0	25.6	16.6	19.2	21.9	21.5	18.9	15.9
Master's/professional	9.9	11.0	8.5	6.2	8.3	13.7	8.4	12.6	11.9	12.2	11.5	8.0
Ph.D./postdoctoral	1.5	1.7	0.8	0.4	1.1	2.0	1.2	2.5	2.4	2.3	1.8	0.6

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates: 1989.

Table 5.2--Percentage distribution of doctorate recipients with selected background characteristics by program area: 1989

Characteristic	Number of respondents	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	34,319	100.0	15.6	3.1	18.3	13.2	2.2	2.8	1.6	6.6	15.9	17.4	3.3
Male	21,811	100.0	16.4	3.6	12.2	19.1	2.0	1.6	1.6	5.3	20.3	15.0	2.9
Female	12,508	100.0	14.4	2.2	28.8	3.0	2.5	5.0	1.4	9.0	8.2	21.5	3.9
Race/ethnicity													
Am Indian or Alaskan	94	100.0	9.6	1.1	25.6	7.4	0.0	3.2	1.1	6.4	19.1	19.1	6.4
Asian or Pacific Islander	5,182	100.0	14.6	4.7	6.4	31.4	1.1	1.8	0.6	2.3	24.4	10.8	1.9
Black	1,246	100.0	11.4	2.2	39.2	4.7	0.8	3.3	1.6	5.2	5.5	20.5	5.6
Hispanic	1,064	100.0	19.6	1.2	18.2	11.1	1.0	1.5	1.6	9.8	14.2	19.3	2.4
White	23,357	100.0	16.3	2.9	20.3	9.5	2.5	3.1	1.8	7.5	14.5	18.0	3.4
Unknown	3,376	100.0	13.4	2.9	14.4	15.2	2.5	2.9	1.3	6.4	16.6	20.9	3.6
Age at PhD													
26 or younger	708	100.0	15.7	1.7	1.3	26.0	1.3	0.8	0.4	1.6	40.5	10.2	0.6
27-29	6,001	100.0	22.7	1.8	1.9	20.0	0.8	1.1	0.8	3.4	30.8	15.8	0.8
30-34	10,264	100.0	20.6	3.2	7.5	17.4	2.2	2.4	1.6	6.3	18.1	18.2	2.4
35-39	6,921	100.0	14.5	4.2	21.6	10.2	3.0	3.6	2.0	8.9	9.7	18.3	4.0
40-45	4,702	100.0	7.9	3.5	38.7	4.6	2.6	4.3	2.1	8.2	6.3	16.5	5.4
46 or older	3,112	100.0	3.1	2.6	53.6	2.3	1.9	3.8	2.0	7.8	2.5	14.0	6.4
Unknown	2,611	100.0	11.5	2.8	15.3	14.3	2.8	3.2	1.0	6.2	16.0	22.8	3.9
Marital status													
Married	19,512	100.0	15.4	3.6	20.7	13.7	2.0	2.9	1.5	6.3	14.4	15.9	3.4
Not Married	11,714	100.0	16.9	2.4	14.8	12.3	2.3	2.7	1.7	7.2	18.3	18.6	2.9
Unknown	3,093	100.0	12.3	2.9	16.1	14.1	2.8	3.1	1.1	6.5	15.8	21.6	3.8
Citizenship													
U.S. citizen	23,398	100.0	16.3	2.8	22.4	8.0	2.5	3.1	1.9	7.3	13.8	18.4	3.5
Native	22,304	100.0	16.4	2.8	22.7	7.4	2.5	3.2	1.9	7.2	13.7	18.5	3.6
Naturalized	1,094	100.0	12.7	3.2	15.6	19.9	1.9	2.2	1.4	8.4	15.9	15.8	2.9
Non-U.S. citizen	8,274	100.0	15.2	4.0	7.4	27.9	1.1	1.9	0.9	4.7	21.8	12.7	2.4
Permanent resident	1,626	100.0	14.6	4.2	10.1	22.4	1.8	1.7	1.3	9.8	16.5	14.0	3.6
Temporary resident	6,648	100.0	15.3	3.9	6.8	29.2	1.0	2.0	0.8	3.5	23.1	12.4	2.1
Unknown	2,647	100.0	11.6	2.8	15.8	14.1	2.8	3.2	1.0	6.5	15.8	22.6	3.8

See footnotes at end of table.

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Table 5.2--Percentage distribution of doctorate recipients with selected background characteristic by program area: 1989--Continued

Characteristic	Number of respondents	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Number of dependents													
None	14,858	100.0	17.8	2.3	14.8	11.5	2.4	2.9	1.5	7.0	18.5	18.6	2.6
One	5,114	100.0	15.7	3.4	18.8	14.5	2.0	2.9	1.7	6.3	16.1	15.8	2.9
Two	4,622	100.0	13.5	3.9	22.1	14.7	1.7	3.1	1.3	5.9	13.7	16.0	4.0
Three or more	4,834	100.0	13.2	4.8	27.2	16.1	1.5	2.4	1.5	5.0	10.0	13.5	4.7
Unknown	4,891	100.0	13.4	2.7	16.0	13.1	2.7	2.9	2.0	8.0	15.6	20.1	3.6
Father's education													
Less than high school	5,858	100.0	12.1	3.4	28.9	12.4	1.1	3.1	1.5	5.8	11.6	15.9	4.1
High school graduate	6,610	100.0	15.1	3.1	23.5	11.3	2.0	3.0	1.5	6.2	14.6	16.3	3.5
Some college	3,551	100.0	14.2	3.1	21.4	11.2	2.1	3.5	1.6	6.1	14.7	18.2	3.9
Bachelor's	6,734	100.0	17.3	3.3	12.1	17.0	2.2	2.5	1.6	6.5	17.5	16.8	3.0
Master's/professional	4,953	100.0	20.0	3.2	11.9	12.3	3.2	3.0	1.7	7.4	16.9	17.8	2.6
Ph.D./postdoctoral	2,583	100.0	18.7	2.4	9.0	13.6	2.4	1.3	1.8	8.5	22.8	17.8	1.8
Unknown	4,030	100.0	12.7	2.9	15.7	14.2	2.5	3.0	1.3	6.8	17.0	20.5	3.4
Mother's education													
Less than high school	6,094	100.0	12.0	3.5	23.5	17.7	1.0	2.8	1.2	5.1	14.2	15.2	3.8
High school graduate	9,844	100.0	16.0	3.4	21.0	12.9	1.8	3.0	1.7	5.9	14.2	16.5	3.6
Some college	5,074	100.0	16.6	2.9	20.2	9.8	2.6	3.2	1.5	7.4	15.1	17.7	3.1
Bachelor's	5,598	100.0	18.8	2.9	12.7	12.6	2.9	2.5	1.7	7.7	18.1	17.1	2.8
Master's/professional	2,978	100.0	17.8	2.7	11.7	10.9	3.0	2.4	2.0	7.9	19.3	19.6	2.7
Ph.D./postdoctoral	441	100.0	18.6	1.8	4.5	10.0	2.9	2.3	2.7	10.7	24.5	20.6	1.4
Unknown	4,290	100.0	12.9	2.7	15.6	14.7	2.4	3.0	1.3	6.8	17.0	20.4	3.2

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates: 1989.

Table 6.1--Percentage distribution of U.S citizen doctorate recipients by race/ethnicity, and sex within program area: 1979

Characteristic	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	31,239	4,655	715	7,385	2,490	682	568	829	2,630	4,299	5,961	1,025
U.S. citizen	25,464	3,746	540	6,568	1,293	617	451	754	2,281	3,287	5,074	853
White	21,920	3,343	484	5,430	1,085	560	388	644	1,951	2,876	4,429	730
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	69.6	77.2	84.9	57.9	97.0	61.4	56.2	73.4	58.2	88.5	64.8	66.6
Female	30.4	22.8	15.1	42.1	3.0	38.6	43.8	26.6	41.8	11.5	35.2	33.4
Black	1,056	42	14	558	17	12	20	33	74	48	188	50
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	52.2	50.0	92.9	47.3	94.1	58.3	40.0	60.6	48.6	91.7	50.5	54.0
Female	47.8	50.0	7.1	52.7	5.9	41.7	60.0	39.4	51.4	8.3	49.5	46.0
Am Indian & Alaskan	81	3	1	40	3	2	0	3	5	4	17	3
	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0
Male	69.1	100.0	100.0	60.0	100.0	100.0	0.0	100.0	40.0	100.0	70.6	66.7
Female	30.9	0.0	0.0	40.0	0.0	0.0	0.0	0.0	60.0	0.0	29.4	33.3
Asian & Pacific Islander	428	92	4	54	69	4	13	7	34	77	64	10
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	72.7	67.4	75.0	61.1	100.0	100.0	53.8	57.1	61.8	81.8	64.1	40.0
Female	27.3	32.6	25.0	38.9	0.0	0.0	46.2	42.9	38.2	18.2	35.9	60.0
Hispanic	462	39	5	162	15	7	3	16	84	37	86	8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	66.7	66.7	60.0	64.8	93.3	42.9	66.7	81.3	52.4	73.0	73.3	100.0
Female	33.3	33.3	40.0	35.2	6.7	57.1	33.3	18.8	47.6	27.0	26.7	0.0

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the member of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1979.

Table 6.2--Percentage distribution of U.S citizen doctorate recipients by recipient, race/ethnicity, and sex: 1979

Characteristic	Number of respondents	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	31,239	100.0	14.9	2.3	23.6	8.0	2.2	1.8	2.7	8.4	13.8	19.1	3.3
U.S. citizen	25,464	100.0	14.7	2.1	25.8	5.1	2.4	1.8	3.0	9.0	12.9	19.9	3.3
White	21,920	100.0	15.3	2.2	24.8	4.9	2.6	1.8	2.9	8.9	13.1	20.2	3.3
Male	15,261	100.0	16.9	2.7	20.6	6.9	2.3	1.4	3.1	7.4	16.7	18.8	3.2
Female	6,659	100.0	11.4	1.1	34.3	0.5	3.2	2.6	2.6	12.3	5.0	23.4	3.7
Black	1,056	100.0	4.0	1.3	52.8	1.6	1.1	1.9	3.1	7.0	4.5	17.8	4.7
Male	551	100.0	3.8	2.4	47.9	2.9	1.3	1.5	3.6	6.5	8.0	17.2	4.9
Female	505	100.0	4.2	0.2	58.2	0.2	1.0	2.4	2.6	7.5	0.8	18.4	4.6
Am Indian & Alaskan	81	100.0	3.7	1.2	49.4	3.7	2.5	0.0	3.7	6.2	4.9	21.0	3.7
Male	56	100.0	5.4	1.8	42.9	5.4	3.6	0.0	5.4	3.6	7.1	21.4	3.6
Female	25	100.0	0.0	0.0	64.0	0.0	0.0	0.0	0.0	12.0	0.0	20.0	4.0
Asian & Pacific Islander	428	100.0	21.5	0.9	12.6	16.1	0.9	3.0	1.6	7.9	18.0	15.0	2.3
Male	311	100.0	19.9	1.0	10.6	22.2	1.3	2.3	1.3	6.8	20.3	13.2	1.3
Female	117	100.0	25.6	0.9	17.9	0.0	0.0	5.1	2.6	11.1	12.0	19.7	5.1
Hispanic	462	100.0	8.4	1.1	35.1	3.2	1.5	0.6	3.5	18.2	8.0	18.6	1.7
Male	308	100.0	8.4	1.0	34.1	4.5	1.0	0.6	4.2	14.3	8.8	20.5	2.6
Female	154	100.0	8.4	1.3	37.0	0.6	2.6	0.6	1.9	26.0	6.5	14.9	0.0
Unknown	1,517	100.0	15.0	2.1	21.4	6.9	2.1	1.8	3.4	8.8	16.2	19.1	3.4
Male	1,093	100.0	17.0	2.6	15.5	9.1	2.0	1.4	3.8	6.4	20.2	18.7	3.4
Female	424	100.0	9.7	0.9	36.6	0.9	2.4	2.8	2.4	14.9	5.7	20.3	3.5

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1979.

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Table 7.1-Percentage distribution of U.S. citizen doctorate recipients by race/ethnicity, and sex within program area: 1984

Characteristic	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	31,337	5,035	869	6,808	2,913	687	722	617	2,232	4,452	5,930	1,072
U.S. citizen	24,027	3,983	579	5,912	1,239	601	582	544	1,817	3,130	4,783	857
White	21,350	3,656	526	5,085	1,062	556	515	482	1,615	2,824	4,282	747
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	61.7	71.4	73.2	47.4	93.9	56.5	47.1	65.1	58.2	84.1	54.7	56.0
Female	38.3	28.6	26.8	52.6	6.1	43.5	52.9	34.9	41.8	15.9	45.3	44.0
Black	953	56	11	446	12	15	19	25	54	35	194	46
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	44.9	51.8	63.6	39.3	91.7	66.7	36.8	56.0	38.9	85.7	44.3	45.7
Female	55.2	48.2	36.4	60.7	8.3	33.3	63.2	44.0	61.1	14.3	55.7	54.3
An Indian & Alaskan	74	21	2	33	1	0	1	2	3	7	10	2
	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	71.6	72.7	100.0	60.6	100.0	0.0	100.0	50.0	66.7	100.0	80.0	100.0
Female	27.0	27.3	0.0	39.4	0.0	0.0	0.0	50.0	33.3	0.0	20.0	0.0
Asian & Pacific Islander	512	116	22	60	95	2	21	6	20	106	67	11
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	66.0	59.8	81.7	45.0	83.2	50.0	47.6	50.0	45.0	77.4	61.2	72.7
Female	34.0	40.2	18.3	55.0	16.8	50.0	52.4	50.0	55.0	22.6	38.8	27.3
Hispanic	536	44	10	146	22	8	10	10	81	53	128	24
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	58.6	70.5	80.0	42.5	81.8	87.5	20.0	90.0	50.6	83.0	61.7	54.2
Female	41.4	29.5	20.0	57.5	18.2	12.5	80.0	10.0	49.4	17.0	38.3	45.8

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1984.

Table 7.2.--Percentage distribution of U.S. citizen doctorate recipients by race/ethnicity, and sex: 1984

Characteristic	Number of respondents	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	31,337	100.0	16.1	2.8	21.7	9.3	2.2	2.3	2.0	7.1	14.2	18.9	3.4
U.S. citizen	24,027	100.0	16.6	2.4	24.6	5.2	2.5	2.4	2.3	7.6	13.0	19.9	3.6
White	21,350	100.0	17.1	2.5	23.8	5.0	2.6	2.4	2.3	7.6	13.2	20.1	3.5
Male	13,171	100.0	19.8	2.9	18.3	7.6	2.4	1.5	2.4	6.1	18.0	17.8	3.2
Female	8,179	100.0	12.8	1.7	32.7	0.8	3.0	4.0	2.1	9.8	5.5	23.7	4.0
Black	953	100.0	5.9	1.2	51.0	1.3	1.6	2.0	2.6	5.7	3.7	20.4	4.8
Male	427	100.0	6.8	1.6	44.7	2.6	2.3	1.6	3.3	4.9	7.0	20.1	4.9
Female	526	100.0	5.1	0.8	56.1	0.2	1.0	2.3	2.1	6.3	1.0	20.5	4.8
Am Indian & Alaskan	74	100.0	14.9	2.7	44.6	4.1	0.0	1.4	2.7	4.1	9.5	13.5	2.7
Male	54	100.0	14.8	3.7	37.0	5.6	0.0	1.9	1.9	3.7	13.0	14.8	3.7
Female	20	100.0	15.0	0.0	65.0	0.0	0.0	0.0	5.0	5.0	0.0	10.0	0.0
Asian & Pacific Islander	512	100.0	21.9	2.3	11.7	18.6	0.4	4.1	1.2	3.9	20.7	13.1	2.1
Male	338	100.0	19.8	3.3	8.0	23.4	0.3	3.0	0.9	2.7	24.3	12.1	2.4
Female	174	100.0	25.9	0.6	19.0	9.2	0.6	6.3	1.7	6.3	13.8	14.9	1.7
Hispanic	536	100.0	8.2	1.9	27.2	4.1	1.5	1.9	1.9	15.1	9.9	23.9	4.5
Male	314	100.0	9.9	2.5	19.7	5.7	2.2	0.6	2.9	13.1	14.0	25.2	4.1
Female	222	100.0	5.9	0.9	37.8	1.8	0.5	3.6	0.5	18.0	4.1	22.1	5.0
Unknown	602	100.0	17.3	3.0	16.9	7.5	3.3	2.7	3.2	7.3	17.4	16.9	4.5
Male	426	100.0	19.7	3.1	11.5	10.1	2.8	1.4	3.5	5.6	21.8	16.9	3.5
Female	176	100.0	11.4	2.8	30.1	1.1	4.5	5.7	2.3	11.4	6.8	17.0	6.8

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1984.

Table 8.1--Percentage distribution of U.S. citizen doctorate recipients by race/ethnicity, and sex within program area: 1989

Characteristic	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	34,319	5,367	1,068	6,276	4,544	746	974	538	2,270	5,455	5,956	1,125
U.S. citizen	23,398	3,804	664	5,243	1,864	579	729	438	1,709	3,233	4,306	829
White	20,892	3,467	619	4,575	1,583	537	675	388	1,539	2,908	3,859	742
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	57.4	63.9	65.3	41.1	86.6	57.4	28.3	66.8	49.4	78.8	49.3	53.9
Female	42.6	36.1	34.7	58.9	13.4	42.6	71.7	33.2	50.6	21.2	50.7	46.1
Black	821	52	13	390	24	8	24	17	47	35	170	41
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	39.8	53.8	69.2	33.1	87.5	50.0	16.7	47.1	38.3	68.6	40.0	34.1
Female	60.2	46.2	30.8	66.9	12.5	50.0	83.3	52.9	61.7	31.4	60.0	65.9
Am Indian & Alaskan	94	9	1	25	7	0	3	1	6	18	18	6
	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	52.1	55.6	100.0	40.0	71.4	0.0	0.0	0.0	33.3	83.3	44.4	50.0
Female	47.9	44.4	0.0	60.0	28.6	0.0	100.0	100.0	66.7	16.7	55.6	50.0
Asian & Pacific Islander	625	127	15	56	173	18	11	6	16	117	70	16
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	70.6	60.6	73.3	41.1	86.7	61.1	54.5	66.7	56.3	82.9	58.6	75.0
Female	29.4	39.4	26.7	58.9	13.3	38.9	45.5	33.3	43.8	17.1	41.4	25.0
Hispanic	582	73	7	156	34	9	10	14	61	70	130	18
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	53.1	74.0	85.7	43.6	82.4	22.2	30.0	78.6	50.8	65.7	39.2	50.0
Female	46.9	26.0	14.3	56.4	17.6	77.8	70.0	21.4	49.2	34.3	60.8	50.0

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1989.

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Table 8.2.--Percentage distribution of U.S. citizen doctorate recipients by race/ethnicity, and sex: 1989

Characteristic	Number of respondents	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	34,319	100.0	15.6	3.1	18.3	13.2	2.2	2.8	1.6	6.6	15.9	17.4	3.3
U.S. citizen	23,398	100.0	16.3	2.8	22.4	8.0	2.5	3.1	1.9	7.3	13.8	18.4	3.5
White	20,492	100.0	16.6	3.0	21.9	7.6	2.6	3.2	1.9	7.4	13.9	18.5	3.6
Male	11,987	100.0	18.5	3.4	15.7	11.4	2.6	1.6	2.2	6.3	19.1	15.9	3.5
Female	8,505	100.0	14.0	2.4	30.2	2.4	2.6	5.4	1.4	8.7	6.9	22.0	3.8
Black	901	100.0	6.3	1.6	47.3	2.9	1.8	2.9	2.1	5.7	4.3	20.7	5.0
Male	327	100.0	8.6	2.8	39.4	6.4	1.2	1.2	2.4	5.5	7.3	20.8	4.3
Female	574	100.0	4.4	0.9	52.8	0.6	2.3	4.0	1.8	5.9	2.2	20.6	5.5
Am Indian & Alaskan	94	100.0	9.6	1.1	26.6	7.4	0.0	3.2	1.1	6.4	19.1	19.1	6.4
Male	49	100.0	10.2	2.0	20.4	18.2	0.0	0.0	0.0	4.1	30.6	16.3	8.1
Female	45	100.0	8.9	0.0	33.3	4.4	0.0	6.7	2.2	8.9	6.7	22.2	4.7
Asian & Pacific Islander	625	100.0	20.3	2.4	4.0	27.7	2.9	1.8	1.0	2.6	18.7	11.2	2.6
Male	441	100.0	17.5	2.5	3.2	34.0	2.5	1.4	0.9	2.0	22.0	9.1	2.7
Female	184	100.0	27.2	2.2	17.9	12.5	3.8	2.7	1.1	3.8	10.9	15.8	2.2
Hispanic	540	100.0	12.5	1.2	28.6	5.9	1.5	1.7	2.4	10.1	12.0	22.3	1.1
Male	319	100.0	13.5	1.9	22.0	8.1	0.6	1.9	3.6	10.0	14.4	14.5	2.9
Female	273	100.0	7.7	0.4	32.2	2.2	2.6	2.6	1.5	11.0	9.9	28.9	0.7
Unknown	384	100.0	19.8	2.3	18.7	11.2	1.8	1.6	3.1	10.4	22.1	15.4	1.6
Male	260	100.0	20.4	3.2	9.1	14.2	2.3	1.1	3.9	8.5	27.3	12.1	0.7
Female	102	100.0	17.6	0.0	39.6	2.9	0.0	2.9	1.0	15.7	6.9	24.5	3.9

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer sciences.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1989.

Table 9.--Percentage distribution of program areas of non-U.S. citizen doctorate recipients by country of citizenship: 1979, 1984, 1989

Country of citizenship	Number of respondents	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
1979													
Total, top 20 & other	4,907	100.0	16.3	3.2	12.2	23.2	0.8	1.9	1.2	5.3	18.9	14.0	3.0
1. Taiwan	433	100.0	17.6	0.9	2.5	34.6	0.5	1.6	0.2	0.7	34.4	6.2	0.7
2. India	432	100.0	10.0	5.6	3.9	39.4	0.0	2.3	0.5	1.6	28.2	7.2	1.4
3. Canada	280	100.0	10.0	6.8	26.1	3.9	3.2	2.1	4.6	7.9	10.4	21.1	3.9
4. Iran	181	100.0	13.3	3.9	14.9	30.9	0.0	0.0	0.0	2.2	15.5	15.5	3.9
5. Korea	174	100.0	8.0	3.4	5.2	31.0	1.1	1.1	0.6	4.0	17.8	21.8	5.7
6. Thailand	166	100.0	21.7	2.4	29.5	21.7	0.6	1.8	0.0	3.6	4.8	11.4	2.4
7. England	152	100.0	15.1	3.3	10.5	7.2	3.3	2.0	2.0	15.8	19.1	18.4	3.3
8. Nigeria	147	100.0	14.3	2.7	33.3	11.6	2.0	4.8	1.4	4.1	6.8	12.9	6.1
9. Brazil	145	100.0	33.8	0.0	15.2	20.0	0.0	2.1	0.0	2.1	11.7	13.1	2.1
10. Israel	116	100.0	6.9	7.8	7.8	27.6	0.9	0.9	0.0	4.3	24.1	18.1	1.7
11. Japan	109	100.0	12.8	0.0	5.5	23.9	0.9	1.8	0.9	7.3	19.3	25.7	1.8
12. Hong Kong	98	100.0	24.5	1.0	1.0	24.5	1.0	1.0	1.0	1.0	35.7	7.1	2.0
13. Australia	88	100.0	6.8	3.4	39.8	6.8	1.1	0.0	4.5	3.4	11.4	19.3	3.4
14. Mexico	86	100.0	27.9	1.2	9.3	23.3	0.0	0.0	0.0	2.3	22.1	11.6	2.3
15. Turkey	75	100.0	8.0	8.0	4.0	45.3	0.0	0.0	1.3	4.0	12.0	12.0	5.3
16. Egypt	74	100.0	12.2	1.4	25.7	37.8	0.0	2.7	0.0	2.7	6.8	6.8	4.1
17. Greece	68	100.0	25.0	0.0	2.9	32.4	0.0	1.5	0.0	5.9	25.0	7.4	0.0
18. France	62	100.0	11.3	11.3	0.0	24.2	3.2	0.0	1.6	14.5	21.0	9.7	3.2
19. Malaysia	54	100.0	29.6	5.6	11.1	9.3	1.9	0.0	1.9	5.6	11.1	16.7	7.4
20. Chile	50	100.0	20.0	2.0	10.0	4.0	0.0	2.0	0.0	10.0	34.0	16.0	2.0
All other	1,917	100.0	17.9	2.8	12.1	20.3	0.6	2.2	1.4	6.9	17.0	15.3	3.4
1984													
Total, top 20 & other	6,056	100.0	14.9	4.2	11.1	25.5	0.7	1.8	0.8	5.1	19.6	13.7	2.7
1. Taiwan	727	100.0	14.7	2.2	2.5	44.3	0.3	1.8	0.7	1.0	27.0	5.2	0.4
2. India	519	100.0	11.4	8.3	2.1	37.4	0.2	1.0	0.2	1.9	30.3	5.0	2.3
3. Iran	347	100.0	11.2	6.3	9.5	34.3	0.0	0.9	0.0	0.6	18.4	18.4	0.3
4. Canada	331	100.0	13.9	5.4	19.9	6.6	3.6	3.6	2.1	9.7	10.9	19.9	4.2
5. Korea	325	100.0	8.9	5.8	5.5	35.4	0.9	0.0	0.6	4.0	19.4	16.9	2.5
6. Nigeria	208	100.0	11.5	2.4	36.1	14.4	0.5	4.8	0.0	3.8	7.7	11.1	7.7
7. Thailand	182	100.0	12.6	4.9	30.2	19.8	0.0	2.2	0.5	1.6	9.3	15.9	2.7
8. England	147	100.0	15.6	2.7	12.2	8.2	1.4	2.0	0.7	13.6	24.5	17.0	2.0
9. Brazil	138	100.0	37.7	0.0	13.0	19.6	0.7	1.4	0.7	6.5	10.9	7.2	2.2
10. Japan	138	100.0	7.2	3.6	13.0	27.5	1.4	0.7	1.4	8.0	18.1	16.7	2.2
11. Egypt	127	100.0	16.5	8.7	8.7	35.4	0.0	6.3	0.0	2.4	11.0	6.3	4.7
12. Israel	116	100.0	6.0	6.0	12.9	19.0	2.6	0.0	0.0	7.8	18.1	22.4	5.2
13. Saudi Arabia	102	100.0	14.7	3.9	37.3	14.7	0.0	0.0	1.0	3.9	0.0	17.6	6.9
14. Hong Kong	101	100.0	18.8	3.0	2.0	29.7	0.0	5.9	2.0	0.0	28.7	8.9	1.0

See footnotes at end of table.

Table 9.--Percentage distribution of program areas of non-U.S. citizen doctorate recipients by country of citizenship: 1979, 1984, 1989--Continued

Country of citizenship	Number of respondents	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
15. Mexico	97	100.0	19.6	3.1	11.3	19.6	0.0	2.1	0.0	5.2	18.6	20.6	0.0
16. Australia	93	100.0	18.3	8.6	21.5	5.4	2.2	2.2	0.0	5.4	17.2	14.0	5.4
17. Turkey	87	100.0	3.4	9.2	3.4	47.1	0.0	1.1	0.0	2.3	19.5	11.5	2.3
18. Greece	84	100.0	9.5	0.0	0.0	41.7	1.2	1.2	0.0	4.8	28.6	11.9	1.2
19. France	74	100.0	5.4	2.7	5.4	23.0	0.0	0.0	2.7	29.7	21.6	9.5	0.0
20. Malaysia	72	100.0	20.8	1.4	18.1	16.7	1.4	1.4	0.0	1.4	15.3	22.2	1.4
All other	2,041	100.0	17.8	3.1	10.9	19.0	0.6	1.8	1.1	6.7	19.5	16.3	3.2
1989													
Total, top 20 & other	8,274	100.0	15.2	4.0	7.4	27.9	1.1	1.9	0.9	4.7	21.8	12.7	2.4
1. Taiwan	976	100.0	14.0	3.4	4.4	43.8	0.6	1.7	0.4	0.5	22.2	7.2	1.7
2. Korea	932	100.0	10.5	7.3	5.6	33.0	1.5	1.2	0.3	1.7	17.9	18.2	2.7
3. India	681	100.0	12.3	11.6	1.0	37.0	0.1	3.5	0.4	3.2	24.1	5.1	1.5
4. People's Republic of China	647	100.0	17.5	0.8	1.7	24.1	0.5	1.1	0.5	1.7	49.3	2.8	0.2
5. Canada	363	100.0	17.6	4.7	13.8	10.5	4.7	3.9	1.4	8.3	13.8	18.5	3.0
6. Iran	221	100.0	6.3	2.3	4.5	49.8	1.4	0.0	0.9	1.4	20.8	12.2	0.5
7. England	157	100.0	16.6	3.8	10.2	8.9	2.5	0.6	3.2	15.3	18.5	14.6	5.7
8. Greece	146	100.0	6.8	0.0	0.7	47.9	0.0	0.0	1.4	3.4	25.3	13.0	1.4
9. Japan	145	100.0	9.7	2.8	10.3	13.1	4.1	2.1	4.1	11.0	17.9	24.1	0.7
10. West Germany	139	100.0	9.4	0.7	2.2	12.2	1.4	0.7	2.2	20.9	34.5	15.1	0.7
11. Mexico	136	100.0	33.1	1.5	4.4	20.6	0.0	1.5	0.0	2.9	17.6	16.2	2.2
12. Thailand	134	100.0	14.2	2.2	30.6	11.9	0.7	4.5	1.5	3.0	15.7	13.4	2.2
13. Egypt	128	100.0	24.2	4.7	3.9	38.3	0.0	2.3	0.0	3.9	13.3	7.0	2.3
14. Brazil	123	100.0	25.2	0.0	8.9	24.4	4.9	0.8	0.0	4.1	13.8	17.1	0.8
15. Nigeria	117	100.0	16.2	4.3	32.5	9.4	0.9	3.4	0.9	2.6	6.0	17.1	6.8
16. Hong Kong	116	100.0	4.3	3.4	6.0	32.8	1.7	0.0	2.6	2.6	28.4	14.7	3.4
17. Israel	96	100.0	9.4	3.1	6.3	19.8	4.2	4.2	2.1	8.3	22.9	16.7	3.1
18. Saudi Arabia	92	100.0	8.7	1.1	23.9	28.3	0.0	0.0	2.2	5.4	5.4	17.4	7.6
19. Turkey	88	100.0	4.5	4.5	2.3	59.1	1.1	0.0	0.0	1.1	12.5	12.5	2.3
20. Malaysia	78	100.0	17.9	10.3	24.4	17.9	1.3	1.3	0.0	3.8	14.1	3.8	5.1
All other	2,759	100.0	18.0	2.8	9.0	22.2	0.8	2.2	1.0	6.8	19.4	15.0	2.9

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1979, 1984, 1989.

Table 10.1.--Percentage distribution of postgraduation employment plans of doctorate recipients by type of employer, primary and secondary work activity, and program area: 1979

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Type of employer	16,533	1,290	597	4,674	1,515	381	306	403	1,313	1,961	3,379	714
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
4-year college	49.9	52.9	87.1	42.6	29.8	77.2	44.8	60.3	75.1	36.4	53.2	60.4
Medical school	1.9	7.6	0.0	1.0	1.1	0.0	15.7	0.2	0.2	0.7	2.3	0.7
Junior/community college	4.8	2.2	0.8	10.5	0.1	6.0	0.3	8.9	6.9	1.6	2.2	2.4
Elem/secondary school	7.9	0.3	0.0	24.0	0.0	3.4	1.0	6.9	4.8	0.3	1.9	0.8
U.S. federal government	6.3	9.5	2.7	2.2	12.6	1.0	13.1	6.7	1.9	11.6	7.3	5.7
State government	2.9	2.8	0.2	3.7	0.8	0.8	1.6	2.0	0.8	0.8	5.9	3.1
Local government	2.7	0.7	0.2	5.8	0.3	0.5	1.0	1.5	0.4	0.2	3.6	2.8
Nonprofit organization	6.5	5.4	1.0	5.7	2.7	4.7	8.2	8.2	5.6	2.0	11.8	15.3
Industry or business	14.9	17.5	5.9	2.6	51.6	3.4	11.4	4.2	3.2	45.4	7.7	5.2
Self-employed	1.9	1.1	2.0	1.8	1.0	2.6	2.9	0.7	1.1	0.6	3.6	3.2
Other	0.2	0.1	0.2	0.1	0.0	0.3	0.0	0.2	0.1	0.3	0.6	0.4
Primary work activity	15,641	1,265	567	4,332	1,453	360	288	372	1,218	1,885	3,232	669
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	27.1	51.3	12.9	6.7	68.1	4.2	33.3	7.0	5.3	64.5	23.3	10.6
Teaching	44.8	32.8	74.8	43.7	22.2	83.1	40.3	67.5	81.2	27.2	43.8	53.3
Administration	13.9	3.7	7.6	36.0	1.9	3.3	11.1	14.0	4.9	2.5	5.7	16.7
Prof services to individual	11.0	6.8	2.6	11.4	4.2	1.4	14.2	4.0	4.3	3.2	24.9	11.8
Other	3.2	5.4	2.1	2.2	3.6	8.1	1.0	7.5	4.3	2.7	2.4	5.5
Secondary work activity	9,101	805	442	2,409	635	214	211	196	704	883	2,154	448
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	47.4	44.5	70.8	33.0	45.8	41.1	46.9	57.1	67.2	47.3	52.9	50.2
Teaching	20.3	29.8	16.1	22.5	20.0	8.9	24.6	13.3	9.4	22.3	20.8	12.5
Administration	16.6	13.8	5.9	21.4	21.9	16.4	12.3	16.3	12.8	17.6	13.9	19.0
Prof services to individuals	12.1	10.1	6.3	18.6	9.6	12.1	12.8	8.2	6.7	11.0	9.7	14.5
Other	3.6	1.9	0.9	4.6	2.7	21.5	3.3	5.1	4.0	1.8	2.7	3.8

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1979.

Table 10.2.--Percentage distribution of postgraduation employment plans of doctorate recipients by type of employer, primary and secondary work activity, and program area: 1984

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Type of employer	15,681	1,149	669	4,500	1,493	373	402	295	1,188	1,832	3,064	716
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
4-year college	46.9	46.2	85.8	35.3	37.7	76.1	51.2	60.0	75.4	39.2	44.7	62.2
Medical school	1.8	5.2	0.0	1.3	0.5	0.3	8.7	0.3	0.2	0.5	3.2	1.4
Junior/community college	3.8	2.0	0.6	8.3	0.1	4.8	0.2	7.8	6.0	1.1	1.4	2.1
Elem/secondary school	10.3	0.3	0.1	31.4	0.0	2.4	0.5	8.8	4.0	0.2	3.4	1.3
U.S. federal government	5.8	11.2	2.1	2.7	10.9	0.8	10.0	6.1	1.9	10.2	6.0	4.2
State government	2.7	3.0	0.4	3.7	0.5	0.3	1.7	3.7	0.2	0.8	5.3	2.1
Local government	2.2	0.3	0.0	4.8	0.4	1.1	1.5	1.4	0.4	0.1	2.9	2.0
Nonprofit organization	7.3	5.6	0.9	6.0	1.7	7.8	8.5	6.8	5.8	1.5	15.5	17.3
Industry or business	15.8	24.0	7.8	3.2	47.4	3.2	14.9	3.4	4.8	45.9	9.7	3.2
Self-employed	3.1	1.7	1.9	3.1	0.7	3.2	2.5	1.7	1.3	0.6	7.0	4.2
Other	0.3	0.4	0.3	0.1	0.2	0.0	0.2	0.0	0.1	0.0	0.8	0.1
Primary work acttivity	15,298	1,195	652	4,317	1,481	354	396	284	1,148	1,784	3,001	686
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	28.0	57.7	23.3	5.7	65.1	5.4	34.3	13.7	6.3	66.1	24.3	8.2
Teaching	39.7	26.9	64.4	38.2	24.8	77.1	39.6	60.9	76.3	27.1	32.5	55.1
Administration	15.6	3.5	6.9	39.9	2.4	5.9	11.6	12.3	8.0	1.5	7.1	16.9
Prof services to individuals	13.9	9.0	3.4	13.6	5.1	5.6	13.9	8.5	5.7	3.5	33.5	14.9
Other	2.8	2.9	2.0	2.7	2.5	5.9	0.5	4.6	3.7	1.8	2.6	5.0
Secondary work activity	9,184	748	529	2,386	740	227	287	165	701	910	1,994	497
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	43.9	39.0	62.8	30.9	46.8	40.5	47.4	50.9	63.8	43.4	47.0	47.1
Teaching	23.3	27.4	25.1	23.4	27.4	12.8	20.2	15.2	14.7	25.7	24.9	19.9
Administration	16.7	21.5	5.5	19.4	14.7	17.6	18.1	22.4	12.0	19.5	14.7	17.9
Prof services to individuals	12.2	8.7	4.7	21.7	9.1	12.8	11.8	8.5	4.3	9.6	9.9	11.7
Other	3.8	3.3	1.9	4.5	2.0	16.3	2.4	3.0	5.3	1.9	3.5	3.4

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1984.

Table 10.3.--Percentage distribution of postgraduation employment plans of doctorate recipients by type of employer, primary and secondary work activity, and program area: 1984

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Type of employer	16,287	1,181	777	4,047	2,046	405	566	300	1,297	1,918	3,037	713
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Four-year college	49.8	45.6	90.3	38.9	34.6	73.3	54.9	74.7	80.6	42.4	47.8	62.7
Medical school	1.7	6.5	0.4	0.9	0.5	0.0	6.5	0.3	0.2	0.6	2.9	0.8
Junior/community college	2.7	0.6	0.3	7.2	0.1	3.5	1.1	4.0	3.2	0.8	1.1	1.1
Elem/secondary school	8.6	0.7	0.0	30.2	0.0	3.2	0.5	4.3	3.1	0.1	2.8	2.1
U.S. federal government	5.0	10.4	1.3	1.5	9.1	2.0	7.1	4.3	1.0	8.1	6.4	2.0
State government	2.1	2.7	0.3	2.8	0.6	0.0	2.7	1.0	0.5	0.9	4.1	1.1
Local government	2.2	0.3	0.3	5.4	0.2	0.7	1.6	0.0	0.5	0.1	3.2	2.7
Nonprofit organization	6.9	6.0	0.4	6.1	2.2	9.6	9.5	6.3	6.4	1.5	13.7	17.0
Industry or business	17.9	24.7	5.9	3.7	51.8	2.7	13.6	3.7	3.0	44.9	10.8	4.6
Self-employed	2.9	1.9	0.9	3.2	0.7	4.9	2.5	1.3	1.5	0.5	6.1	5.9
Other	0.3	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	1.2	0.0
Primary work activity	15,767	1,211	741	3,845	1,995	387	548	283	1,241	1,855	2,973	688
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	30.7	53.9	36.0	6.3	67.6	5.4	31.0	8.5	8.0	62.9	25.5	12.6
Teaching	39.2	25.0	56.8	39.1	21.6	77.3	42.3	73.9	77.3	28.4	31.1	53.6
Administration	13.5	4.4	3.4	39.8	1.9	4.1	11.3	6.4	4.8	2.2	6.7	13.1
Prof services to individuals	13.4	11.4	1.9	11.9	6.4	3.4	13.5	6.0	5.8	4.0	34.1	16.3
Other	3.3	5.3	1.9	2.9	2.6	9.8	1.8	5.3	4.2	2.6	2.7	4.4
Secondary work activity	9,821	776	638	2,161	1,057	262	415	185	822	1,074	1,911	520
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	44.9	40.5	56.1	33.5	41.0	39.7	48.4	68.6	67.9	44.0	45.7	47.3
Teaching	25.0	26.9	38.1	24.4	26.6	11.5	21.2	15.7	14.6	25.9	28.3	21.5
Administration	14.5	18.7	3.3	16.3	17.6	16.4	15.9	8.1	9.1	18.1	13.1	14.6
Prof services to individuals	11.7	11.2	1.7	21.0	12.2	13.7	12.8	2.7	3.8	10.1	9.0	12.3
Other	3.9	2.7	0.8	4.8	2.6	18.7	1.7	4.9	4.6	2.0	3.9	4.2

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1989.

Table 11.1.--Percentage distribution of postgraduation employment plans of doctorate recipients by selected types of employer, primary work activity, and program area: 1979

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
4-year college	7,690	625	493	1,827	413	280	129	226	916	680	1,695	406
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	13.6	32.6	12.4	6.8	23.5	1.8	11.6	1.8	3.7	29.4	16.2	5.7
Teaching	75.7	55.4	84.6	68.3	75.1	93.9	78.3	85.8	91.5	68.2	76.8	83.7
Administration	6.8	1.4	2.6	19.7	0.2	1.8	4.7	9.7	3.4	1.0	2.3	7.6
Prof services to individuals	2.8	4.5	0.2	4.4	0.5	0.0	4.7	0.4	0.8	0.4	4.7	1.7
Other	1.2	6.1	0.2	0.8	0.7	2.5	0.8	2.2	0.7	0.9	0.1	1.2
Medical school	273	83	0	42	15	0	40	1	2	14	72	4
	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	50.5	51.8	0.0	33.3	80.0	0.0	50.0	100.0	100.0	71.4	47.2	50.0
Teaching	20.9	33.7	0.0	14.3	0.0	0.0	25.0	0.0	0.0	7.1	16.7	0.0
Administration	9.9	4.8	0.0	31.0	13.3	0.0	10.0	0.0	0.0	7.1	1.4	50.0
Prof services to individuals	17.9	8.4	0.0	21.4	6.7	0.0	15.0	0.0	0.0	14.3	33.3	0.0
Other	0.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0
Junior/community college	745	26	5	458	2	22	1	32	83	31	70	15
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	1.7	3.8	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0
Teaching	69.8	92.3	100.0	58.1	100.0	86.4	100.0	90.6	90.4	96.8	80.0	86.7
Administration	23.5	3.8	0.0	34.1	0.0	9.1	0.0	9.4	7.2	3.2	5.7	13.3
Prof services to individuals	4.6	0.0	0.0	5.7	0.0	0.0	0.0	0.0	2.4	0.0	8.6	0.0
Other	0.4	0.0	0.0	0.4	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Elem/secondary school	1,231	4	0	1,056	0	12	3	27	57	6	60	6
	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	1.6	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0
Teaching	32.9	100.0	0.0	28.1	0.0	100.0	0.0	81.5	98.2	100.0	8.3	50.0
Administration	51.7	0.0	0.0	58.6	0.0	0.0	33.3	14.8	1.8	0.0	16.7	16.7
Prof services to individuals	12.4	0.0	0.0	10.1	0.0	0.0	66.7	0.0	0.0	0.0	70.0	33.3
Other	1.4	0.0	0.0	1.4	0.0	0.0	0.0	3.7	0.0	0.0	1.7	0.0

See footnotes at end of table.

Table 11.1.--Percentage distribution of postgraduation employment plans of doctorate recipients by selected types of employer, primary work activity, and program area: 1979--Continued

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
U.S. federal government	967	107	15	93	182	4	35	25	24	216	228	38
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	64.9	82.2	13.3	20.4	87.4	25.0	54.3	28.0	33.3	89.4	53.5	26.3
Teaching	3.2	0.9	0.0	14.0	0.5	0.0	5.7	8.0	12.5	1.4	2.2	2.6
Administration	12.2	5.6	80.0	33.3	2.7	25.0	11.4	16.0	16.7	4.6	9.2	52.6
Prof services to individuals	12.3	6.5	0.0	22.6	1.6	25.0	28.6	24.0	12.5	1.4	26.3	13.2
Other	7.3	4.7	6.7	9.7	7.7	25.0	0.0	24.0	25.0	3.2	8.8	5.3
Industry or business	2,272	204	31	111	723	13	31	13	36	835	240	35
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	77.0	80.9	19.4	25.2	88.0	23.1	83.9	7.7	19.4	88.6	52.1	37.1
Teaching	0.8	0.0	3.2	4.5	0.3	0.0	0.0	7.7	0.0	0.5	1.3	5.7
Administration	5.3	4.9	35.5	24.3	2.1	15.4	6.5	30.8	16.7	2.6	6.7	17.1
Prof services to individuals	10.7	11.3	25.8	27.0	6.1	7.7	6.5	7.7	19.4	4.8	32.1	28.6
Other	6.2	2.9	16.1	18.9	3.6	53.8	3.2	46.2	44.4	3.5	7.9	11.4

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the Research Council, Survey of Earned Doctorates, 1979.

Table 11.2.--Percentage distribution of postgraduation employment plans of doctorate recipients by selected types of employer, primary work activity, and program area: 1984

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
4-year college	7,018	507	554	1,506	531	66	198	171	864	688	1,307	426
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	18.0	38.9	24.5	6.3	32.4	3.0	17.7	10.5	5.2	34.0	22.3	7.0
Teaching	70.7	54.0	74.9	64.3	66.1	89.8	74.7	73.7	87.2	64.5	69.1	80.0
Administration	7.9	1.4	0.5	24.2	1.1	4.5	5.1	11.7	5.8	0.6	3.2	9.2
Prof services to individuals	2.8	4.1	0.0	4.6	0.2	1.5	2.5	3.5	1.0	0.7	4.9	2.8
Other	0.6	1.6	0.0	0.6	0.2	1.1	0.0	0.6	0.8	0.1	0.5	0.9
Medical school	267	59	0	49	7	1	34	1	2	10	94	10
	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	46.8	61.0	0.0	20.4	85.7	0.0	55.9	0.0	50.0	90.0	43.6	20.0
Teaching	17.6	15.3	0.0	34.7	14.3	0.0	11.8	0.0	50.0	0.0	12.8	30.0
Administration	12.4	5.1	0.0	30.6	0.0	100.0	14.7	0.0	0.0	10.0	5.3	30.0
Prof services to individuals	22.5	16.9	0.0	14.3	0.0	0.0	17.6	0.0	0.0	0.0	37.2	20.0
Other	0.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
Junior/community college	562	21	4	356	1	18	1	22	68	19	37	15
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	1.6	0.0	0.0	2.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0
Teaching	61.6	100.0	50.0	46.9	0.0	77.8	100.0	95.5	95.6	100.0	70.3	66.7
Administration	30.6	0.0	25.0	44.9	0.0	5.6	0.0	0.0	4.4	0.0	8.1	26.7
Prof services to individuals	5.3	0.0	25.0	5.3	100.0	0.0	0.0	4.5	0.0	0.0	18.9	6.7
Other	0.9	0.0	0.0	0.8	0.0	5.6	0.0	0.0	0.0	0.0	2.7	0.0
Elem/secondary school	1,547	4	1	1,351	0	9	2	25	44	3	99	9
	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	1.4	0.0	0.0	1.0	0.0	0.0	0.0	4.0	2.3	0.0	5.1	0.0
Teaching	31.0	100.0	0.0	29.2	0.0	88.9	0.0	96.0	81.8	100.0	5.1	55.6
Administration	50.0	0.0	100.0	56.2	0.0	11.1	0.0	0.0	13.6	0.0	4.0	33.3
Prof services to individuals	16.5	0.0	0.0	12.4	0.0	0.0	100.0	0.0	2.3	0.0	85.9	11.1
Other	1.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

See footnotes at end of table.

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Table 11.2.--Percentage distribution of postgraduation employment plans of doctorate recipients by selected types of employer, primary work activity, and program area: 1984--Continued

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
U.S. federal government	872	123	14	114	158	3	37	17	22	180	178	26
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	60.6	76.4	42.9	14.0	83.5	100.0	54.1	41.2	22.7	85.6	48.9	15.4
Teaching	3.6	4.1	7.1	7.9	3.2	0.0	0.0	0.0	4.5	3.3	2.2	0.0
Administration	14.1	10.6	42.9	39.5	5.1	0.0	18.9	11.8	22.7	5.0	9.0	46.2
Prof services to individuals	15.0	5.7	7.1	24.6	3.2	0.0	27.0	17.6	18.2	3.3	33.7	26.9
Other	6.8	3.3	0.0	14.0	5.1	0.0	0.0	29.4	31.8	2.8	6.2	11.5
Industry or business	2,374	268	50	137	683	10	60	8	52	807	278	21
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	72.8	78.0	12.0	22.6	86.1	0.0	75.0	25.0	11.5	90.6	39.2	4.8
Teaching	1.1	1.5	0.0	4.4	0.4	0.0	1.7	0.0	7.7	0.5	1.1	4.8
Administration	5.8	3.0	48.0	30.7	1.8	10.0	8.3	0.0	19.2	0.9	7.6	33.3
Prof services to individuals	14.3	13.1	26.0	23.4	8.5	40.0	11.7	50.0	30.8	5.6	42.4	38.1
Other	6.0	4.5	14.0	19.0	3.2	50.0	3.3	25.0	30.8	2.5	9.7	19.0

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the Research Council, Survey of Earned Doctorates, 1984.

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Table 11.3.--Percentage distribution of postgraduation employment plans of doctorate recipients by selected types of employer, primary work activity, and program area: 1989

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
4-year college	7,680	504	671	1,488	658	285	300	208	989	774	1,380	423
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	21.7	37.5	37.3	8.8	36.2	4.2	20.3	5.3	7.0	35.1	27.2	13.5
Teaching	68.2	52.0	61.8	64.9	61.7	89.8	70.0	87.5	87.7	63.0	62.2	76.6
Adiministration	6.2	1.6	0.7	21.0	0.8	3.2	5.3	4.3	2.9	0.8	3.6	5.9
Prof services to individuals	2.9	4.4	0.1	3.8	0.8	0.4	4.0	1.4	1.2	1.0	6.5	3.3
Other	1.1	4.6	0.0	1.4	0.6	2.5	0.3	1.4	1.2	0.0	0.5	0.7
Medical school	264	75	2	35	11	0	35	1	3	11	86	5
	100.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	40.9	57.3	50.0	17.1	100.0	0.0	42.9	0.0	0.0	63.6	29.1	0.0
Teaching	15.2	14.7	0.0	31.4	0.0	0.0	28.6	0.0	33.3	9.1	4.7	40.0
Administration	8.7	4.0	0.0	34.3	0.0	0.0	5.7	0.0	33.3	0.0	2.3	60.0
Prof services to individuals	33.7	21.3	50.0	17.1	0.0	0.0	20.0	100.0	33.3	27.3	62.8	0.0
Other	1.5	2.7	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	1.2	0.0
Junior/community college	411	7	2	277	1	14	6	12	38	15	32	7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	1.9	14.3	0.0	1.4	0.0	0.0	0.0	8.3	0.0	6.7	3.1	0.0
Teaching	58.6	85.7	50.0	44.4	100.0	100.0	66.7	91.7	97.4	86.7	81.3	71.4
Administration	34.1	0.0	50.0	46.9	0.0	0.0	33.3	0.0	0.0	6.7	12.5	28.6
Prof services to individuals	4.4	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Other	1.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0
Elem/secondary school	1,314	8	0	1,144	0	12	3	12	38	1	81	15
	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	1.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	5.3	0.0	3.7	0.0
Teaching	28.2	75.0	0.0	25.7	0.0	100.0	66.7	83.3	78.9	100.0	8.6	60.0
Administration	55.5	25.0	0.0	62.1	0.0	0.0	0.0	8.3	13.2	0.0	12.3	6.7
Prof services to individuals	13.2	0.0	0.0	9.6	0.0	0.0	33.3	8.3	2.6	0.0	70.4	26.7
Other	2.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	4.9	6.7

See footnotes at end of table.

Table 11.3.--Percentage distribution of postgraduation employment plans of doctorate recipients by selected types of employer, primary work activity, and program area: 1989--Continued

Type of employer and work activity	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
U.S. federal government	778	118	9	51	179	8	39	13	12	148	189	12
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	62.5	66.9	22.2	21.6	85.5	25.0	48.7	30.8	8.3	75.7	53.4	16.7
Teaching	2.4	1.7	22.2	5.9	2.2	0.0	7.7	15.4	8.3	0.7	0.5	0.0
Administration	13.5	9.3	11.1	58.8	7.3	0.0	17.9	0.0	25.0	11.5	9.5	41.7
Prof services to individuals	14.5	15.3	11.1	5.9	2.8	12.5	20.5	15.4	50.0	5.4	30.7	25.0
Other	7.1	6.8	33.3	7.8	2.2	62.5	5.1	38.5	8.3	6.8	5.8	16.7
Industry or business	2,728	276	41	134	1,002	10	74	10	35	812	303	31
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Research & development	71.5	73.6	26.8	12.7	84.6	20.0	66.2	10.0	20.0	87.9	31.0	16.1
Teaching	1.3	1.1	4.9	6.7	0.6	20.0	0.0	0.0	2.9	1.1	0.3	6.5
Administration	4.4	3.6	26.8	29.1	0.9	20.0	6.8	30.0	11.4	1.0	6.6	32.3
Prof services to individuals	16.9	17.8	17.1	35.8	10.0	10.0	25.7	20.0	25.7	5.9	55.1	32.3
Other	5.9	4.0	24.4	15.7	3.9	30.0	1.4	40.0	40.0	4.1	6.9	12.9

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the Research Council, Survey of Earned Doctorates, 1989.

Table 12.--Percentage distribution of doctorate recipients by selected characteristics within program area: 1989

Characteristic	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Number of years from bachelor's to Ph.D.	31,978	5,082	1,010	5,925	4,180	687	888	515	2,141	5,074	5,433	1,043
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Three years or less	0.3	0.3	0.2	0.1	0.7	0.1	0.2	0.0	0.1	0.5	0.1	0.0
Four	2.0	2.0	1.2	0.3	3.7	0.9	0.9	0.4	0.4	4.8	1.6	0.8
Five	6.6	7.8	2.6	0.6	11.2	2.5	2.3	2.9	2.8	14.0	6.0	2.5
Six	9.2	13.5	6.6	1.5	13.3	2.6	3.9	3.7	4.6	17.6	8.2	1.7
Seven	9.5	14.3	5.9	1.9	13.8	6.3	4.7	5.0	5.7	15.2	9.8	3.5
Eight	8.1	10.9	7.7	2.5	10.9	5.8	4.6	9.5	7.6	10.6	9.0	3.8
Nine	7.5	9.1	8.3	2.9	9.9	7.1	7.3	8.0	7.9	8.1	8.6	6.4
Ten or more years	56.8	42.1	67.4	90.1	36.6	74.7	76.0	70.5	70.9	29.2	56.7	81.3
Amount of debt at graduation	31,174	4,985	975	5,778	4,104	658	867	498	2,057	4,973	5,271	1,008
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	52.9	47.6	52.0	61.3	65.0	44.1	55.4	52.4	49.6	56.6	38.1	50.9
$5,000 or less	15.9	18.3	12.0	15.0	13.6	18.8	14.0	17.3	19.7	17.0	14.5	16.0
$5,001-$10,000	12.4	14.9	12.5	9.6	10.0	15.3	11.8	13.9	13.4	12.6	13.9	11.4
$10,001-$20,000	11.5	12.0	13.9	9.2	7.2	14.9	11.6	9.4	11.7	9.7	17.3	13.4
$20,001 or more	7.1	6.9	9.4	4.6	4.0	6.5	6.7	6.4	5.0	3.9	15.7	8.0
Debt but level unknown	0.3	0.3	0.1	0.3	0.2	0.3	0.6	0.6	0.7	0.3	0.5	0.3
Physical disabilities 3/	31,223	4,983	983	5,786	4,109	662	876	500	2,059	4,957	5,305	1,003
None	98.7	99.1	98.7	98.2	99.4	98.9	98.6	98.6	98.3	99.1	98.5	97.8
Visual	0.4	0.3	0.3	0.4	0.2	0.5	0.1	0.6	0.6	0.5	0.2	0.4
Orthopedic	0.4	0.2	0.4	0.7	0.1	0.3	0.5	0.6	0.5	0.2	0.4	1.0
Auditory	0.2	0.2	0.1	0.3	0.1	0.2	0.3	0.0	0.1	0.2	0.2	0.3
Vocal	--	--	0.0	--	--	0.0	0.0	0.0	0.0	0.0	--	0.0
Other or more than one	0.3	0.1	0.3	0.4	0.1	0.2	0.3	0.2	0.3	0.1	0.5	0.4
Disability not specified	0.1	0.1	0.2	0.1	--	0.0	0.1	0.0	0.2	--	0.1	0.1

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

2 Includes mathematics and computer science.

-- Less than 0.05 percent

3/ Total may exceed 100.0 percent because of possible multiple disabilities.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1989.

Table 13.1.--Percentage distribution of doctorate recipients by primary source of support during graduate study within program area: 1989

Primary source of support	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
Total	28,321	4,599	902	5,315	3,709	592	779	450	1,826	4,426	4,798	925
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Own/family sources	36.9	19.1	41.9	70.7	15.6	54.9	48.1	48.7	39.4	13.1	44.1	56.5
Own earnings	23.8	7.8	24.3	56.4	8.3	34.6	33.1	31.8	21.8	6.2	25.2	40.1
Spouse's earnings	9.2	8.6	11.1	10.8	3.6	12.2	11.9	11.6	13.1	5.3	12.3	11.4
Family contributions	3.9	2.7	6.5	3.5	3.6	8.1	3.1	5.3	4.5	1.6	6.6	5.1
University-related	40.4	47.2	46.3	14.6	54.7	32.1	24.6	38.4	50.9	59.9	35.0	26.3
Teaching assistant	17.2	12.5	27.4	6.4	13.0	22.1	8.9	24.0	38.3	27.1	18.4	14.2
Research assistant	16.4	25.6	13.0	3.4	37.0	1.2	10.1	1.6	1.4	28.2	8.1	5.0
University fellowship	4.9	6.8	5.1	1.9	3.8	7.3	3.6	11.1	9.1	3.5	6.2	4.0
College work-study	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.1	0.5	0.1
Other	1.7	2.0	0.7	2.7	1.0	1.4	1.8	1.6	1.9	1.0	1.8	3.0
Federal government	15.0	25.4	4.7	7.8	16.4	7.7	16.9	8.4	5.4	20.8	14.8	8.0
Research assistant	6.1	10.3	0.2	0.3	11.3	0.0	2.2	0.2	0.4	16.2	1.6	0.5
National Science Foundation	2.5	1.5	0.0	--	6.0	0.0	0.1	0.0	0.1	8.8	0.4	0.1
National Institutes of Health	1.7	6.6	0.1	--	0.8	0.0	1.2	0.0	0.2	2.3	0.6	0.1
U.S. Dept. of Agriculture	0.2	1.0	0.0	--	0.4	0.0	0.1	0.0	0.0	--	0.1	0.0
Other federal, RA	1.7	1.1	0.1	0.2	4.1	0.0	0.8	0.2	0.1	5.1	0.5	0.3
Other federal	8.9	15.1	4.5	7.5	5.1	7.7	14.7	8.1	5.0	4.6	13.2	7.5
NSF fellowship	0.9	1.7	0.2	0.1	1.1	0.0	0.4	0.0	0.1	1.6	1.1	0.0
USDA fellowship	0.1	0.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	--	0.0
NIH traineeship	2.1	9.9	0.0	0.2	0.5	0.0	5.8	0.0	0.0	0.5	1.0	0.2
Other US Dept of Health & Human Services	0.2	0.5	0.0	0.1	0.1	0.0	1.2	0.0	0.0	--	0.3	0.1
U.S. Dept of Education	0.5	0.4	0.0	0.6	0.3	0.8	0.7	1.5	0.7	0.3	0.7	0.2
Veterans Administration	0.3	0.1	0.6	0.6	0.1	0.5	0.5	0.2	0.3	0.1	0.2	0.4
Guaranteed student loan	3.5	1.2	3.0	4.9	0.6	5.6	4.0	3.1	3.1	0.8	8.4	5.3
National direct student loan	0.2	0.1	0.0	0.3	0.0	0.5	0.0	1.3	0.3	--	0.4	0.1
Other	1.1	0.8	0.7	0.7	2.2	0.3	2.1	2.0	0.5	1.3	1.1	1.2

See footnotes at end of table.

Table 13.1--Percentage distribution of doctorate recipients by primary source of support during graduate study within program area: 1989--Continued

Primary source of support	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
U.S. non-federal fellowships	1.1	1.3	0.8	0.4	1.3	2.1	1.3	1.5	0.9	1.4	1.2	0.4
Ford foundation	0.1	0.1	0.0	--	0.0	0.2	0.0	0.2	0.0	0.0	0.1	0.3
Rockefeller foundation	--	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
Other fellowship	1.0	1.1	0.8	0.4	1.3	1.7	1.3	1.3	0.9	1.4	1.0	0.1
Other sources	6.6	7.0	6.3	6.7	12.2	3.2	9.1	2.8	3.5	4.8	4.9	8.7
Business/employer funds	2.3	1.3	2.8	3.5	4.5	0.8	3.7	1.1	0.7	2.0	0.9	2.5
Foreign government	3.1	4.6	2.4	1.8	6.7	1.0	3.5	1.1	1.6	2.2	2.3	3.5
Other	1.2	1.1	1.1	1.4	1.0	1.4	1.9	0.6	1.2	0.6	1.7	2.7

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classification of Instructional Program (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathematics and computer science.

--Less than 0.05 percent.

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1989.

Table 13.2.--Percentage of doctorate recipients by any source of support during graduate study within program area: 1989

Any source of support	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[1]	Social sciences	Other
Total[3]	30,961	4,976	969	5,752	4,085	648	859	495	2,026	4,939	5,216	996
Own/family resources	73.3	61.6	82.8	94.0	56.5	92.6	84.1	86.1	82.6	47.2	85.8	88.2
Own earnings	54.7	34.8	60.7	85.7	32.7	81.8	68.5	72.1	64.2	26.2	67.5	75.9
Spouse's earnings	24.0	23.1	28.9	27.4	13.7	31.3	28.6	29.9	32.6	15.1	29.9	31.0
Family contributions	23.4	23.4	24.1	15.3	26.6	33.6	20.6	29.1	27.1	18.9	31.3	24.1
University-related	76.0	80.7	85.2	46.4	83.5	83.8	66.0	87.3	89.4	91.1	78.5	64.9
Teaching assistant	50.0	40.1	64.8	23.7	46.1	66.4	32.0	70.3	74.4	74.8	56.5	42.5
Research assistant	39.0	50.5	47.2	15.3	64.1	9.3	32.8	21.2	15.0	56.3	35.9	21.2
University fellowship	19.9	20.3	22.2	9.2	16.8	28.5	12.8	46.5	39.8	19.4	24.2	17.7
College work-study	2.6	1.8	1.4	2.6	1.2	5.1	3.1	5.5	4.9	1.1	4.5	3.2
Other	6.5	6.0	2.9	9.0	3.5	10.3	8.8	9.7	7.4	4.0	7.7	9.3
Federal	53.2	69.3	38.4	34.7	38.2	50.5	72.2	52.5	48.2	54.0	71.9	48.6
Research assistant	12.9	21.6	0.9	1.8	20.7	0.3	10.0	0.4	1.6	30.3	5.8	3.1
National Science Foundation	5.6	3.9	0.4	0.4	11.6	0.3	0.7	0.0	0.8	18.3	2.1	0.6
National Institutes of Health	3.8	13.8	0.1	0.2	1.6	0.0	6.4	0.0	0.2	5.2	1.8	0.5
U.S. Dept of Agriculture	0.6	2.5	0.1	0.1	0.5	0.0	0.5	0.0	0.0	0.2	0.2	0.2
Other federal, RA	4.2	3.1	0.3	1.1	9.0	0.0	3.0	0.4	0.6	10.6	2.2	2.0
Other federal	40.3	47.7	37.5	32.9	17.5	50.2	62.2	52.1	46.6	23.6	66.1	45.5
NSF fellowship	1.4	2.5	0.2	0.3	1.4	0.0	0.7	0.2	0.3	2.4	2.0	0.2
USDA fellowship	0.1	0.6	0.0	--	0.3	0.0	0.0	0.2	0.0	0.0	--	0.0
NIH traineeship	4.2	15.9	0.3	0.6	0.7	0.0	19.4	0.4	0.0	0.8	4.2	1.3
Other U.S. Dept of Health and Human Services	0.8	1.0	0.0	0.4	0.1	0.0	7.3	0.0	0.1	0.1	1.6	0.7
U.S. Dept of Education	1.8	1.1	1.0	1.8	0.7	2.7	2.6	7.3	4.0	1.0	2.7	1.5
Veterans Administration	1.7	0.8	3.8	2.6	1.1	2.2	2.9	2.6	2.0	1.0	1.8	1.8
Guaranteed student loan	23.6	22.8	26.8	21.6	8.6	33.3	22.7	27.9	30.5	14.3	41.4	30.0
National direct student loan	4.7	2.8	4.0	4.1	1.0	10.6	4.1	7.9	8.2	1.5	10.3	7.3
Other	2.8	1.8	1.3	1.7	4.0	2.2	5.0	8.3	2.6	2.9	3.5	2.8

See footnotes at end of table.

Table 13.2.--Percentage of doctorate recipients by any source of support during graduate study within program area: 1989--Continued

Any source of support	All program areas	Biological/ agric sci	Business	Education	Engineering	Fine arts[1]	Health sciences	History[1]	Humanities	Physical sciences[2]	Social sciences	Other
U.S. non-federal fellowships	4.7	4.0	5.5	1.7	4.7	9.4	6.3	14.5	6.8	5.0	6.0	3.3
Ford foundation	0.3	0.2	0.1	0.1	0.2	0.3	0.1	1.0	0.4	0.0	0.7	0.4
Rockefeller foundation	0.1	0.2	0.0	--	0.0	0.3	0.1	0.4	0.0	0.0	0.1	0.1
Other fellowship	4.4	3.6	5.4	1.6	4.5	9.3	6.1	13.3	6.4	5.0	5.4	2.9
Other sources	16.5	13.7	16.6	19.1	21.7	13.9	20.4	13.7	13.8	12.7	16.0	21.1
Business/employer funds	5.1	2.6	5.6	9.0	7.2	4.0	6.9	3.2	2.4	4.4	3.1	6.6
Foreign (non-U.S.) government	4.9	6.3	5.2	2.4	10.0	2.6	4.5	3.8	3.2	4.6	3.8	5.1
Other	6.8	5.0	6.0	8.0	4.8	7.7	9.5	6.7	8.6	3.9	9.4	10.2

[1] History and the fine, applied and performing arts are classified under Humanities in National Research Council's (NRC) and the National Endowment for the Humanities' (NEH) publications. In the National Center for Education Statistics' Classificiation of Instructional Programs (CIP), history is included under social sciences, and fine, applied, and performing arts is a separate program area.

[2] Includes mathermatics and computer science.

-- Less than 0.05 percent

Note: Missing values are not included in the calculations. Total represents the number of respondents to the item.

[1] Totals will exceed 100.0 percent due to multiple sources of support by the recipients.

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1989.

Table 14.1.--Percentage distribution of education doctorate recipients by field of specialization, and race/ethnicity: 1979

Specialization	Total	White	Black	Hispanic	Asian	American Indian	Unknown
Total	7,385	5,675	669	214	217	42	568
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nonteaching fields	65.4	67.3	67.6	71.5	65.9	59.5	42.8
Curriculum and Instruction	11.8	11.5	13.9	19.6	17.5	14.3	7.6
Educational administration and supervision	20.3	20.7	26.2	18.2	16.6	16.7	12.3
Educational media	1.2	1.3	1.0	0.5	2.3	2.4	0.4
Educational measurement and statistics	1.4	1.4	0.4	2.8	5.1	0.0	0.9
Educational and school psychology	5.6	6.1	3.4	6.1	4.1	2.4	4.4
Social foundations	3.3	3.3	3.0	6.1	4.6	2.4	1.6
Special education	4.3	4.8	2.4	1.9	2.3	4.8	3.3
Student counseling, personnel service	8.2	8.7	6.9	7.9	3.2	7.1	6.7
Higher education research	9.2	9.5	10.3	8.4	10.1	9.5	5.6
Teacher education	6.7	6.8	7.6	5.6	5.1	11.9	4.4
Elementary	2.3	2.3	2.7	2.3	2.3	4.8	1.9
Secondary	2.1	2.1	2.5	1.4	1.8	2.4	1.2
Adult & continuing education	2.3	2.4	2.4	1.9	0.9	4.8	1.2
Teaching fields	19.1	19.7	16.1	14.0	17.1	23.8	19.4
Agricultural education	0.3	0.2	1.3	0.0	0.5	0.0	0.0
Art education	0.7	0.6	1.3	0.5	0.5	0.0	0.5
Business education	0.9	0.9	1.0	0.5	0.9	2.4	0.9
English education	1.1	1.1	0.7	0.9	0.9	2.4	0.9
Foreign languages education	0.5	0.4	0.1	1.4	2.3	0.0	0.2
Home economics education	0.4	0.4	0.9	0.0	0.0	0.0	0.5
Industrial arts education	0.4	0.4	0.1	0.0	0.5	2.4	0.5
Mathematics education	1.2	1.1	1.9	0.9	0.9	0.0	0.5
Music education	1.2	1.2	1.0	0.9	0.9	0.0	1.2
Physical health, and nursing education	4.7	4.9	1.6	1.9	3.7	9.5	7.6
Reading education	2.0	2.3	1.3	1.9	0.9	0.0	1.2
Science education	1.3	1.3	0.6	1.9	1.8	2.4	1.1
Social science education	0.9	0.9	0.9	0.5	0.5	2.4	0.9
Speech education	0.2	0.3	0.1	0.0	0.0	0.0	0.0
Trade & industrial education	2.7	2.9	2.5	2.3	1.8	2.4	1.8
Other teaching fields	0.7	0.7	0.3	0.5	0.9	0.0	1.6
Education, general	5.6	3.3	4.3	5.1	7.4	2.4	29.0
Education, other	3.2	2.9	4.3	3.7	4.6	2.4	4.4

Source: U.S. Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1979.

Table 14.2.--Percentage distribution of education doctorate recipients by field of specialization, and race/ethnicity: 1984

Specialization	Total	White	Black	Hispanic	Asian	American Indian	Unknown
Total	6,808	5,327	634	188	287	33	339
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nonteaching fields	66.6	68.4	66.2	69.1	56.8	66.7	46.0
Curriculum and Instruccion	12.8	12.6	14.0	24.5	13.9	6.1	6.5
Educational administration and supervision	23.0	23.8	23.3	20.2	14.6	30.3	19.2
Educational media	1.2	1.2	1.1	0.5	2.8	0.0	0.6
Educational measurement and statistics	2.3	2.3	2.2	2.2	4.9	6.0	1.8
Educational and school psychology	5.0	5.4	3.0	4.2	3.5	3.0	4.4
Social foundations	2.2	2.1	2.1	5.3	2.8	6.1	2.4
Special education	4.6	5.3	2.2	0.5	3.5	3.0	1.2
Student counseling, and personnel service	5.7	6.0	7.1	3.2	2.4	3.0	2.9
Higher education research	9.7	9.7	11.2	8.5	8.4	9.1	7.1
Teacher education	6.3	6.3	6.0	5.9	4.9	9.1	8.6
Elementary	2.2	2.1	1.9	2.1	1.0	0.0	5.0
Secondary	0.9	0.8	1.3	1.1	0.7	0.0	1.5
Adult and continuing	3.2	3.3	2.8	2.7	3.1	9.1	2.1
Teaching fields	17.2	17.1	18.3	9.0	24.4	12.1	15.6
Agricultural education	0.7	0.5	2.1	0.5	2.4	0.0	0.6
Art education	0.6	0.5	0.6	1.6	1.0	0.0	0.6
Business education	0.8	0.8	1.1	0.0	0.3	0.0	0.0
English education	1.1	1.1	0.9	0.5	1.4	0.0	0.9
Foreign languages education	0.4	0.3	0.2	1.1	1.4	0.0	0.6
Home economics education	0.4	0.4	0.5	0.0	0.3	0.0	0.0
Industrial arts education	0.4	0.3	0.3	0.0	1.7	3.0	0.6
Mathematics education	0.9	0.9	0.6	0.5	2.1	3.0	0.6
Music education	1.4	1.5	1.6	0.0	0.3	0.0	0.9
Physical, health and nursing education	4.9	5.2	3.7	1.6	4.2	6.0	5.9
Reading education	2.1	2.3	1.6	0.5	1.4	0.0	1.2
Science education	1.1	1.0	1.3	0.0	3.5	0.0	1.5
Social science education	0.3	0.2	0.5	1.1	1.0	0.0	0.3
Speech education	0.1	0.2	0.0	0.0	0.0	0.0	2.1
Trade and industrial education	1.7	1.6	3.2	0.0	2.4	0.0	0.0
Other teaching fields	0.3	0.3	0.3	1.6	0.7	0.0	
Education, general	4.6	3.2	4.1	3.7	6.6	6.1	25.1
Education, other	5.3	5.0	5.4	12.2	7.3	6.1	4.7

Source: U.S.Department of Education, National Center for Education Statisticss, and the National Research Council, Survey of Earned Doctorates, 1984.

Table 14.3.--Percentage distribution of education doctorate recipients by field of specialization, and race/ethnicity: 1989

Specialization	Total	White	Black	Hispanic	Asian	American Indian	Unknown
Total	6,276	4,751	489	194	332	25	485
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nonteaching fields	64.4	68.0	68.5	59.3	53.9	84.0	33.4
Curriculum and Instruction	13.4	14.1	11.0	14.9	13.6	20.0	7.2
Educational administration and supervision	26.0	28.0	34.4	20.1	11.4	32.0	10.3
Educational media	1.2	1.2	0.8	0.5	4.2	0.0	0.4
Educational measurement and statistics	1.6	1.3	0.4	1.5	6.9	0.0	1.4
Educational and school psychology	6.2	6.8	2.6	6.7	5.4	4.0	3.9
Social foundations	1.8	1.6	2.0	2.6	3.6	0.0	1.0
Special education	4.1	4.5	3.5	4.1	3.0	8.0	1.4
Student counseling and personnel service	4.2	4.4	5.3	2.6	2.1	20.0	2.5
Higher education research	5.9	6.0	8.4	6.2	3.6	0.0	5.2
Teacher education	7.2	7.2	5.7	9.3	5.7	8.0	8.9
Elementary	2.6	2.1	3.2	3.0	3.3	0.0	5.4
Secondary	0.8	0.9	0.2	2.1	0.3	0.0	1.0
Adult and continuing	3.8	4.1	2.2	4.1	2.1	8.3	2.5
Teaching fields	15.4	15.5	15.3	15.5	25.0	0.0	8.7
Agricultural education	0.6	0.3	1.8	3.1	1.2	0.0	0.0
Art education	0.6	0.5	1.0	0.5	1.8	0.0	1.0
Business education	0.6	0.7	0.8	1.0	0.0	0.0	0.4
English education	0.8	0.8	1.0	1.0	1.5	0.0	0.2
Foreign languages education	0.5	0.5	0.0	2.6	1.2	0.0	0.2
Home economics education	0.3	0.3	0.4	0.0	0.6	0.0	0.4
Indistrial arts education	0.3	0.3	0.2	0.0	0.0	0.0	0.4
Mathematics education	1.1	1.0	1.8	0.0	3.3	0.0	0.4
Music education	1.5	1.7	2.0	0.5	0.9	0.0	0.6
Physical health and nursing education	4.9	5.2	3.8	1.7	6.0	0.0	2.9
Reading education	1.5	1.6	0.8	2.1	2.1	0.0	0.6
Science education	0.8	0.8	0.2	1.0	1.8	0.0	0.6
Social science education	0.2	0.2	0.2	1.0	0.6	0.0	0.0
Speech education	--	--	0.0	0.0	0.0	0.0	0.0
Trade and industrial education	1.1	1.1	0.8	1.0	3.6	0.0	0.2
Other teaching fields	0.5	0.5	0.2	0.0	0.3	0.0	0.6
Education, general	6.6	3.9	5.7	7.2	8.4	4.0	33.0
Education, other	6.4	5.5	4.7	8.8	6.9	4.0	16.1

-- Less than 0.05 percent.

Source: U.S.Department of Education, National Center for Education Statistics, and the National Research Council, Survey of Earned Doctorates, 1989.

Table 15.-- Number of education doctorate recipients by field of specialization, and sex: 1979-1989

Field of specialization	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Education, total											
Total	7,385	7,586	7,497	7,251	7,174	6,808	6,733	6,645	6,450	6,357	6,276
Male	4,277	4,203	3,957	3,712	3,555	3,337	3,242	3,034	2,897	2,846	2,669
Female	3,108	3,383	3,540	3,539	3,619	3,471	3,491	3,611	3,553	3,511	3,607
Nonteaching fields											
Total	4,833	4,853	4,827	4,663	4,712	4,536	4,550	4,361	4,288	4,259	4,041
Male	2,960	2,779	2,639	2,470	2,388	2,280	2,220	2,031	1,963	1,942	1,758
Female	1,873	2,074	2,188	2,193	2,324	2,256	2,330	2,330	2,325	2,317	2,283
Curriculum and instruction											
Total	874	838	815	811	861	869	825	794	762	815	840
Male	471	404	367	347	331	324	323	305	283	309	295
Female	403	434	448	464	530	545	502	489	479	506	545
Educational administration and supervision											
Total	1,500	1,536	1,659	1,474	1,632	1,569	1,625	1,637	1,686	1,748	1,632
Male	1,070	1,024	1,040	929	993	944	934	882	903	929	855
Female	430	512	619	545	639	625	691	755	783	819	777
Educational media											
Total	92	75	77	76	88	83	101	79	68	67	76
Male	64	53	48	44	53	52	51	39	32	41	45
Female	28	22	29	32	35	31	50	40	36	26	31
Educational measures and statistics											
Total	104	89	90	94	137	161	118	105	110	106	101
Male	61	56	49	55	77	88	51	41	50	53	39
Female	43	33	41	39	60	73	67	64	60	53	62
Educational psychology											
Total	415	476	445	454	274	233	388	330	320	323	301
Male	225	235	208	211	108	105	172	134	129	122	124
Female	190	241	237	243	166	128	216	196	191	201	177
School psychology											
Total	0	0	0	0	88	110	102	92	95	98	85
Male	0	0	0	0	44	52	45	37	44	45	28
Female	0	0	0	0	44	58	57	55	51	53	57

See footnotes at end of table.

Table 15.-- Number of education doctorate recipients by field of specialization, and sex: 1979-1989--(continued)

Field of specialization	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Social foundations											
Total	242	214	209	214	142	151	135	124	114	122	110
Male	175	126	122	123	81	98	75	64	58	66	49
Female	67	88	87	91	61	53	60	60	56	56	61
Special education											
Total	316	346	312	347	349	312	270	273	248	257	259
Male	139	141	117	110	120	92	85	76	63	63	52
Female	177	205	195	237	229	220	185	197	185	194	207
Student counseling, personnel service											
Total	607	594	549	540	506	391	397	315	315	324	264
Male	335	328	295	283	252	202	185	151	139	137	107
Female	272	266	254	257	254	189	212	164	176	187	157
Higher education research											
Total	683	685	671	653	635	657	589	612	570	399	373
Male	420	412	393	368	329	323	299	302	262	177	164
Female	263	273	278	285	306	334	290	310	308	222	209
Teacher education, total											
Total	492	639	639	588	483	431	463	489	447	473	451
Male	221	306	272	237	192	169	165	79	142	166	143
Female	271	333	367	351	291	262	298	310	305	307	308
Pre-elementary											
Total	0	74	90	78	63	54	65	86	73	83	63
Male	0	11	11	12	15	10	9	15	9	10	12
Female	0	63	79	66	48	44	56	71	64	73	51
Elementary											
Total	169	162	180	149	111	97	122	94	105	93	99
Male	42	50	60	49	26	34	31	23	20	22	20
Female	127	112	120	100	85	63	91	71	85	71	79
Secondary											
Total	154	168	136	104	88	62	69	86	66	68	53
Male	83	103	76	52	40	26	31	41	35	30	28
Female	71	65	60	52	48	36	38	45	31	38	25
Adult & continuing education											
Total	169	235	233	257	221	218	207	223	203	229	236
Male	96	142	125	124	111	99	94	100	78	104	83
Female	73	93	108	133	110	119	113	123	125	125	153

See footnotes at end of table

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Table 15.-- Number of education doctorate recipients by field of specialization, and sex: 1979-1989--(continued)

Field of specialization	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Teaching fields, total											
Total	1,411	1,471	1,437	1,333	1,327	1,170	1,118	1,142	1,064	987	968
Male	786	790	754	700	658	569	561	550	486	448	428
Female	625	681	683	633	669	601	557	592	578	539	540
Agricultural education											
Total	24	39	43	35	47	47	40	39	39	32	35
Male	24	37	39	32	39	40	34	35	34	32	28
Female	0	2	4	3	8	7	6	4	5	0	7
Art education											
Total	50	45	63	55	58	41	43	43	52	42	39
Male	23	24	27	21	26	20	18	19	19	15	21
Female	27	21	36	34	32	21	25	24	33	27	18
Business education											
Total	66	52	50	44	62	52	52	50	36	44	40
Male	36	26	28	18	34	16	19	21	15	27	15
Female	30	26	22	26	28	36	33	29	21	17	25
English education											
Total	80	76	64	67	76	72	68	79	72	57	51
Male	39	31	24	29	26	22	24	26	18	16	16
Female	41	45	40	38	50	50	44	53	54	41	35
Foreign languages education											
Total	35	36	29	31	25	25	30	37	37	53	33
Male	19	18	11	16	15	11	16	13	21	17	12
Female	16	18	18	15	10	14	14	24	16	36	21
Physical and health education											
Total	346	365	368	351	334	312	309	291	283	269	276
Male	218	215	218	206	171	157	163	156	142	120	125
Female	128	150	150	145	163	155	146	135	141	149	151
Home economics education											
Total	29	27	25	33	25	26	21	17	17	17	19
Male	0	0	0	0	1	1	3	0	0	0	1
Female	29	27	25	33	24	25	18	17	17	17	18

See footnotes at end of table

Table 15.-- Number of education doctorate recipients by field of specialization, and sex: 1979-1989--(continued)

Field of specialization	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Industrial arts education											
Total	29	27	27	39	19	27	13	20	24	11	17
Male	28	25	25	36	17	22	13	20	20	9	14
Female	1	2	2	3	2	5	0	0	4	2	3
Mathematics education											
Total	85	74	62	50	62	64	65	72	74	56	69
Male	51	44	37	30	22	34	33	39	36	24	28
Female	34	30	25	20	40	30	32	33	38	32	41
Music education											
Total	88	110	76	103	112	92	81	94	109	76	97
Male	53	76	48	59	71	56	58	62	53	47	62
Female	35	34	28	44	41	36	23	32	56	29	35
Nursing education											
Total	0	41	23	25	17	21	21	40	36	34	29
Male	0	0	0	1	0	2	1	3	0	2	0
Female	0	41	23	24	17	19	20	37	36	32	29
Reading education											
Total	151	160	193	153	169	142	113	134	94	74	95
Male	32	36	36	42	49	27	20	22	12	9	12
Female	119	124	157	111	120	115	93	112	82	65	83
Science education											
Total	93	96	107	86	78	77	88	65	63	67	48
Male	70	70	71	58	53	51	49	43	40	40	26
Female	23	26	36	28	25	26	39	22	23	27	22
Social science education											
Total	65	52	49	29	39	22	24	22	17	23	13
Male	41	29	34	18	17	12	16	15	8	18	7
Female	24	23	15	11	22	10	8	7	9	5	6
Speech education											
Total	16	10	12	12	2	10	7	5	5	5	1
Male	5	1	3	4	0	3	4	2	1	1	1
Female	11	9	9	8	2	7	3	3	4	4	0

See footnotes at end of table.

Table 15.-- Number of education doctorate recipients by field of specialization, and sex: 1979-1989--(continued)

Field of specialization	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Trade & industrial education											
Total	201	229	213	191	138	117	82	86	68	80	75
Male	131	134	135	113	83	84	59	50	48	51	49
Female	70	95	78	78	55	33	23	36	20	29	26
Other teaching fields											
Total	53	32	33	29	64	23	61	48	38	47	31
Male	16	24	18	17	34	11	31	24	19	20	11
Female	37	8	15	12	30	12	30	24	19	27	20
Education, general											
Total	410	427	405	419	349	311	294	354	366	358	414
Male	209	232	204	195	173	149	159	164	176	165	176
Female	201	195	201	224	176	162	135	190	190	193	238
Education, other											
Total	239	196	189	248	303	360	308	299	285	280	402
Male	101	96	88	110	144	170	137	110	130	125	164
Female	138	100	101	138	159	190	171	189	155	155	238

Source: U.S. Department of Education, National Center for Education Statistics and the National Research Council, Survey of of Earned Doctorates, 1979-1989.

Survey Instrument

Form Approved
OMB No. 3145-0019
Approval Expires 3-89

SURVEY OF EARNED DOCTORATES 1987-88 ,1988-89

This form is to be returned to the GRADUATE DEAN, for forwarding to

The Office of Scientific and Engineering Personnel
National Research Council
2101 Constitution Avenue, Washington, D.C. 20418

Please print or type.

1. Name in full: _____ (Last Name) _____ (First Name) _____ (Middle Name)

   Cross Reference: Maiden name or former name legally changed _____

2. Permanent address through which you could always be reached (Care of, if applicable) _____

   _____ (Number) _____ (Street) _____ (City)

   _____ (State) _____ (Zip Code) _____ (Or Country if not U.S.)

3. U.S. Social Security Number: _ _ _ - _ _ - _ _ _ _

4. Date of birth: _____ (Month, Day, Year) Place of birth: _____ (State, Or Country if not U.S.)

5. Sex: 1 ☐ Male 2 ☐ Female

6. Marital status: 1 ☐ Married
   2 ☐ Not married (including widowed, divorced)

7. Citizenship:
   0 ☐ U.S. native
   1 ☐ U.S. naturalized
   2 ☐ Non-U.S., Immigrant (Permanent Resident)
   _____ (country of present citizenship)
   3 ☐ Non-U.S., Non-Immigrant (Temporary Resident)
   _____ (country of present citizenship)

8. Are you physically handicapped? ☐ Yes ☐ No
   If yes, is it: 1 ☐ Visual 2 ☐ Orthopedic
   3 ☐ Auditory 4 ☐ Vocal
   5 ☐ Other (Specify) _____

9. What is your racial background? (Check only one)
   0 ☐ American Indian or Alaskan Native
   1 ☐ Asian or Pacific Islander
   2 ☐ Black
   3 ☐ White

10a. Is your ethnic heritage Hispanic? ☐ Yes ☐ No

10b. If yes, is it:
   0 ☐ Mexican American
   1 ☐ Puerto Rican
   2 ☐ Other Hispanic

11. Number of dependents: _____ Do not include yourself. (Dependent = someone receiving at least one half of his or her support from you)

EDUCATION

12. Location of high school last attended: _____ (State Or Country if not U.S.) Year of graduation from high school: _____

13. List in the table below all collegiate and graduate institutions you have attended including 2-year colleges and each degree earned. List chronologically, and include your doctoral institution as the last entry.

Institution Name / Location	Years Attended: From	Years Attended: To	Major Field: Use Specialties List: Name	Major Field: Use Specialties List: Number	Degree (if any): Title of Degree	Degree (if any): Granted: Mo	Degree (if any): Granted: Yr

14. In the spaces below, categorize the period of years between receiving your first baccalaureate degree (or equivalent) and receiving your doctorate, including the period spent on your thesis and or dissertation. If necessary, round years so that your total will equal Year of Doctorate minus Year of Baccalaureate.
   1 Number of years as full-time student _____
   2 Number of years as part-time student _____
   3 Number of years not working on degree + _____
   Total = Year of Doctorate minus Year of BA = _____

15. Enter below the title of your doctoral dissertation and the most appropriate classification number and field. If a project report or a musical or literary composition (not a dissertation) is a degree requirement, please check box ☐

   Title _____ Classify field using Specialties List

   _____ Number _____ Name of field

   _____ _____ _____

16. Name the department (or interdisciplinary committee, center, institute, etc.) and school or college of the university which supervised your doctoral program: _____ (Department Institute Committee Program) _____ (School)

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continued on next page

17. Name of your adviser for dissertation, project report, or music literary composition: _____
Last Name First Name Middle Initial

18. What is your best estimate of the percentage of support received from the following sources during the course of your graduate study? (Total should equal 100%)

	%		%		%		%
Own Family Resources		Research Assistant		p ___ Other Dept of Ed		Student Loans	
a ___ Own Earnings		i ___ NSF		q ___ Veterans Administration (G I Bill, etc.)		v ___ Guaranteed Student Loan	
b ___ Spouse's Earnings		j ___ NIH		4 ___ USDA Fellowship		w ___ National Direct Student Loan	
c ___ Family Contributions		2 ___ USDA		r ___ Other Federal		x ___ Other Loan	
University-Related		k ___ Other Federal		Specify		Specify	
d ___ Teaching Assistantship		Other Federal Support		U.S. Nationally Competitive Fellowships (Non-Federal)		Other Sources	
e ___ Research Assistantship		3 ___ NSF Fellowship		s ___ Ford Foundation		y ___ Business Employer Funds	
f ___ University Fellowship		l ___ NIH Traineeship		t ___ Rockefeller Foundation		z ___ Foreign (Non-U.S.) Govt	
g ___ College Work-Study		m ___ Other HHS		u ___ Other Fellowship		5 ___ Other	
h ___ Other		n ___ Title VI Foreign Language & Area Studies Fellowship		Specify		Specify	
Specify		o ___ Graduate & Professional Opportunities Program Fellowship (G*POP)					

19. When you receive your doctorate degree, will you have any debt directly related to your undergraduate and or graduate education (tuition and fees, living expenses, books and supplies, transportation to and from school)?

Yes No

If yes, what will be the level of this cumulative debt?

1 $5,000 or less
2 $5,001–$10,000
3 $10,001–$20,000
4 $20,001–$30,000
5 $30,001 or more

20a. Please check the category which most fully describes your status during the year immediately preceding the award of the doctorate.

0 Full-time employed (Go to item 20b.)
1 Held fellowship
2 Held assistantship
3 Part-time employed
4 Not employed
5 Other (specify) _____

20b. If full-time employed, what type of position did you hold?

6 College or university faculty
7 College or university non-faculty
8 Elem. or sec. school teaching
9 Elem. or sec. school non-teaching
10 Industry or business
11 Other (specify) _____

POSTGRADUATION PLANS

21. What is the status of your current postgraduate plans?

0 Am returning to, or continuing in, predoctoral employment
1 Have signed contract or made definite commitment
2 Am negotiating with one or more specific organizations
3 Am seeking position but have no specific prospects
4 Other (specify) _____

22. What best describes your immediate postgraduate plans?

0 Postdoctoral fellowship } Go to item 23
1 Postdoctoral research associateship } Go to item 23
2 Traineeship } Go to item 23
3 Other study (specify) _____ } Go to item 23
4 Employment (other than 0,1,2,3) } Go to item 24
5 Military service } Go to item 24
6 Other (specify) _____ } Go to item 24

23. If you plan to have a postdoctoral fellowship, associateship, traineeship, or otherwise undertake further study:

A What will be the field of your postdoctoral study? Please enter number from Specialties List _____

B What will be the primary source of research support?

0 U.S. Government
1 College or university
2 Private foundation
3 Nonprofit, other than private foundation
4 Other (specify) _____
5 Unknown

Go to Item 25

24. If you plan to be employed, enter military service, or other:

A What will be the type of employer?

a U.S. 4-year college or university other than medical school
b Foreign university
c Medical school
d Jr. or community college
e Elem. or sec. school
f Foreign government
g U.S. Federal government
h U.S. state government
i U.S. local government
j Nonprofit organization
k Industry or business
l Self-employed
m Other (specify) _____

B Indicate what your **primary** work activity will be with "1" in appropriate box; **secondary** work activity (if any) with "2" in appropriate box.

0 Research and development
1 Teaching
2 Administration
3 Professional services to individuals
5 Other (specify) _____

C In what field will be your working? Please enter number from Specialties List _____

25. What is the name and address of the organization with which you will be associated?

_____
Name of Organization

_____
Street City, State Or Country if not U.S.

BACKGROUND INFORMATION

26. Please indicate, by circling the highest grade attained, the education of

		Elementary School				High School			College			Graduate		
your father	none	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA	MD	PhD	Postdoctoral
your mother	none	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	MA	MD	PhD	Postdoctoral
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Signature _____ Date _____

If you would like to receive a summary of the results of this survey, please check box ☐

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SPECIALTIES LIST

Instructions: The following field listing is to be used in responding to items 13, 15, 23A, and 24C. If a field marked with an asterisk (*) is chosen in item 13 or 15, please write in your field of specialization in the space provided.

AGRICULTURE

000 Agricultural Economics
002 Agricultural Business & Mgmt
005 Animal Breeding & Genetics
010 Animal Nutrition
012 Dairy Science
014 Poultry Science
055 Fisheries Sciences
019 Animal Sciences, Other*
020 Agronomy
025 Plant Breeding & Genetics
030 Plant Path. (See also 120)
032 Plant Protection-Pest Mgmt
039 Plant Sciences, Other*
042 Food Distribution
043 Food Engineering
044 Food Sciences, Other*
046 Soil Chemistry Microbiology
049 Soil Sciences, Other*
050 Horticulture Science
066 Forest Biology
068 Forest Engineering
070 Forest Management
072 Wood Science
074 Renewable Natural Resources
079 Forestry & Related Sci., Other*
080 Wildlife Range Management
098 Agriculture, General
099 Agricultural Sciences, Other*

BIOLOGICAL SCIENCES

100 Biochemistry
105 Biophysics
110 Bacteriology
115 Plant Genetics
120 Plant Path. (See also 030)
125 Plant Physiology
129 Botany, Other*
130 Anatomy
133 Biometrics & Biostatistics
136 Cell Biology
139 Ecology
142 Embryology
145 Endocrinology
148 Entomology
151 Immunology
154 Molecular Biology
157 Microbiology
160 Neurosciences
163 Nutritional Sciences
166 Parasitology
169 Toxicology
170 Genetics, Human & Animal
175 Pathology, Human & Animal
180 Pharmacology, Hum. & Anim.
185 Physiology, Human & Animal
189 Zoology, Other*
198 Biological Sciences, General
199 Biological Sciences, Other*

HEALTH SCIENCES

200 Audiology & Speech Pathology
210 Environmental Health
215 Public Health
220 Epidemiology
230 Nursing
240 Pharmacy
250 Veterinary Medicine
298 Health Sciences, General
299 Health Sciences, Other*

ENGINEERING

300 Aerospace, Aeronautical & Astronautical
303 Agricultural
306 Bioengineering & Biomedical
309 Ceramic
312 Chemical
315 Civil
318 Communications
321 Computer
324 Electrical, Electronics
327 Engineering Mechanics
330 Engineering Physics
333 Engineering Science
336 Environmental Health Engin.
339 Industrial
342 Materials Science
345 Mechanical
348 Metallurgical
351 Mining & Mineral
354 Naval Arch. & Marine Engin.
357 Nuclear
360 Ocean
363 Operations Research (See also 465, 930)
366 Petroleum
369 Polymer
372 Systems
398 Engineering, General
399 Engineering, Other*

COMPUTER AND INFORMATION SCIENCES

400 Computer Sciences*
410 Information Sci. & Systems*

MATHEMATICS

420 Applied Mathematics
425 Algebra
430 Analysis & Functional Analysis
435 Geometry
440 Logic (See also 785)
445 Number Theory
450 Probability & Math. Statistics (See also 690)
455 Topology
460 Computing Theory & Practice
465 Operations Research (See also 363, 930)
498 Mathematics, General
499 Mathematics, Other*

PHYSICAL SCIENCES

Astronomy

500 Astronomy
505 Astrophysics

Atmospheric & Meteorological Sciences

510 Atmospheric Physics & Chem.
512 Atmospheric Dynamics
514 Meteorology
518 Atmos. & Meteor. Sci., Gen.
519 Atmos. & Meteor. Sci., Other*

Chemistry

520 Analytical
522 Inorganic
524 Nuclear
526 Organic
528 Pharmaceutical
530 Physical
532 Polymer
534 Theoretical
538 Chemistry, General
539 Chemistry, Other*

Geological Sciences

540 Geology
542 Geochemistry
544 Geophysics & Seismology
546 Paleontology
548 Mineralogy, Petrology
550 Stratigraphy, Sedimentation
552 Geomorphology & Glacial Geol.
554 Applied Geology
558 Geological Sciences, General
559 Geological Sciences, Other*

Physics

560 Acoustics
561 Atomic & Molecular
562 Electron
564 Elementary Particle
566 Fluids
568 Nuclear
569 Optics
570 Plasma
572 Polymer
574 Solid State
578 Physics, General
579 Physics, Other*

Other Physical Sciences

580 Environmental Sciences
585 Hydrology & Water Resources
590 Oceanography
595 Marine Sciences
599 Physical Sciences, Other*

PSYCHOLOGY

600 Clinical
603 Cognitive
606 Comparative
609 Counseling
612 Developmental
615 Experimental
618 Educational (See also 822)
621 Industrial & Organizational (See also 935)
624 Personality
627 Physiological
630 Psychometrics
633 Quantitative
636 School (See also 825)
639 Social
648 Psychology, General
649 Psychology, Other*

SOCIAL SCIENCES

650 Anthropology
652 Area Studies
658 Criminology
662 Demography
666 Economics
668 Econometrics
670 Geography
674 International Relations
678 Political Sci. & Government
682 Public Policy Studies
686 Sociology
690 Statistics (See also 450)
694 Urban Studies
698 Social Sciences, General
699 Social Sciences, Other*

HUMANITIES

History

700 History, American
705 History, European
710 History of Science
718 History, General
719 History, Other*

Letters

720 Classics
723 Comparative Literature
729 Linguistics
732 Literature, American
733 Literature, English
734 English Language
736 Speech & Debate
738 Letters, General
739 Letters, Other*

Foreign Languages and Literature

740 French
743 German
746 Italian
749 Spanish
752 Russian
755 Slavic (other than Russian)
758 Chinese
762 Japanese
765 Hebrew
768 Arabic
769 Other Languages*

Other Humanities

770 American Studies
773 Archeology
776 Art History & Criticism
780 Music
785 Philosophy (See also 440)
790 Religion (See also 984)
795 Theatre
798 Humanities, General
799 Humanities, Other*

EDUCATION

800 Curriculum & Instruction
805 Educ. Administration & Supervision
810 Educational Media
815 Educ. Stat. & Research
820 Educ. Testing, Evaluation & Measurement
822 Educational Psychology (See also 618)
825 School Psychology (See also 636)
830 Social Foundations
835 Special Education
840 Student Counseling & Personnel Services
845 Higher Education Research

Teacher Education

850 Pre-elementary
852 Elementary
856 Secondary
858 Adult & Continuing

Teaching Fields

860 Agricultural Educ.
861 Art Educ.
862 Business Educ.
864 English Educ.
866 Foreign Languages Educ.
868 Health Educ.
870 Home Economics Educ.
872 Industrial Arts Educ.
874 Mathematics Educ.
876 Music Educ.
878 Nursing Educ.
880 Physical Educ.
882 Reading Educ.
884 Science Educ.
885 Social Science Educ.
886 Speech Educ.
887 Technical Educ.
888 Trade & Industrial Educ.
889 Teacher & Educ. Specific Subject Areas, Other*
898 Education, General
899 Education, Other*

PROFESSIONAL FIELDS

Business & Management

900 Accounting
905 Banking & Finance
910 Business Admin. & Management
915 Business Economics
920 Marketing Mgmt. & Research
925 Business Statistics
930 Operations Research (See also 363, 465)
935 Organiz. Beh. (See also 621)
938 Business & Mgmt., General
939 Business & Mgmt., Other*

Communications

940 Communications Research
945 Journalism
950 Radio & Television
958 Communications, General
959 Communications, Other*

Other Professional Fields

960 Architec. & Environ. Design
964 Home Economics
968 Law
972 Library & Archival Science
976 Public Administration
980 Social Work
984 Theology (See also 790)
988 Professional Fields, General
989 Professional Fields, Other*

999 OTHER FIELDS*

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